Drug & Cosmetic INDUSTRY

APRIL, 1949

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THOMAS R. FARRELL, Editor
ELMER SHEETS, Managing Editor
FRANCIS CHILSON, Production Consultant
M. A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
JUSTUS W. MATTHAEI, News Editor
HILDA C. McCOLLOM, Art Director

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HOOKER RESEARCH PRESENTS
BIS(TRIFLUOROMETHYL)BENZENE

Para Isomer

Molecular Weight	214.11
Freezing Point	−40° to −50°C
Boiling Point	115°C
Specific Gravity, 20°/15.5°C	1.395
Refractive Index, n20/D	1.379

Hooker Bis(trifluoromethyl)benzene (xylene hexafluoride) is a clear, water white liquid. The product, a mixture of the meta and para isomers, is currently available in pilot plant quantities. A study of the literature indicates that it is of interest as a chemical intermediate in the preparation of dyestuffs and in the preparation of non-flammable dielectric and hydraulic fluids.

Technical Data Sheet No. 368 gives physical and chemical characteristics. Literature and samples are available to qualified personnel when requested on your business letterhead.

BENZOYL CHLORIDE

Formula	C_6H_5COCl
Molecular Weight	140.5
Freezing Point	−0.9°C
Boiling Point	198°C
Refractive Index n20/D	1.5536
Flash Point	72°C
Fire Point	85°C
Specific Gravity, 15.5°/15.5°C	1.219

DESCRIPTION

Colorless liquid possessing a pungent characteristic odor; it fumes when exposed to moist air.

USES

Benzoyl Chloride is a highly active chemical which can be used to introduce the benzoyl group into organic compounds, especially through Friedel-Crafts reactions. Other uses are in the manufacture of benzophenone, benzyl benzoates, synthetic perfumes, dyes and pharmaceuticals.

BENZYL CHLORIDE

Synonym	Alphachlorotoluene
Formula	$C_6H_5CH_2Cl$
Molecular Weight	126.5
Freezing Point	−43°C
Distillation Range	5° or less including 179.4°C
Refractive Index, n25/D	1.5365
Specific Gravity, 15.5°/15.5°C	1.107

DESCRIPTION

Colorless to light yellow liquid having a pungent odor. The above data are for the high grade product. Also available as a technical grade with a wider distillation range.

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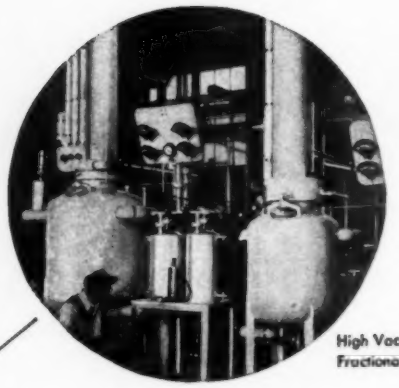

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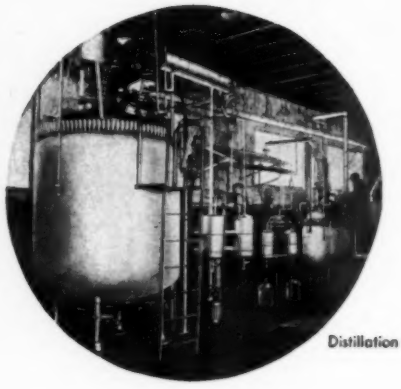

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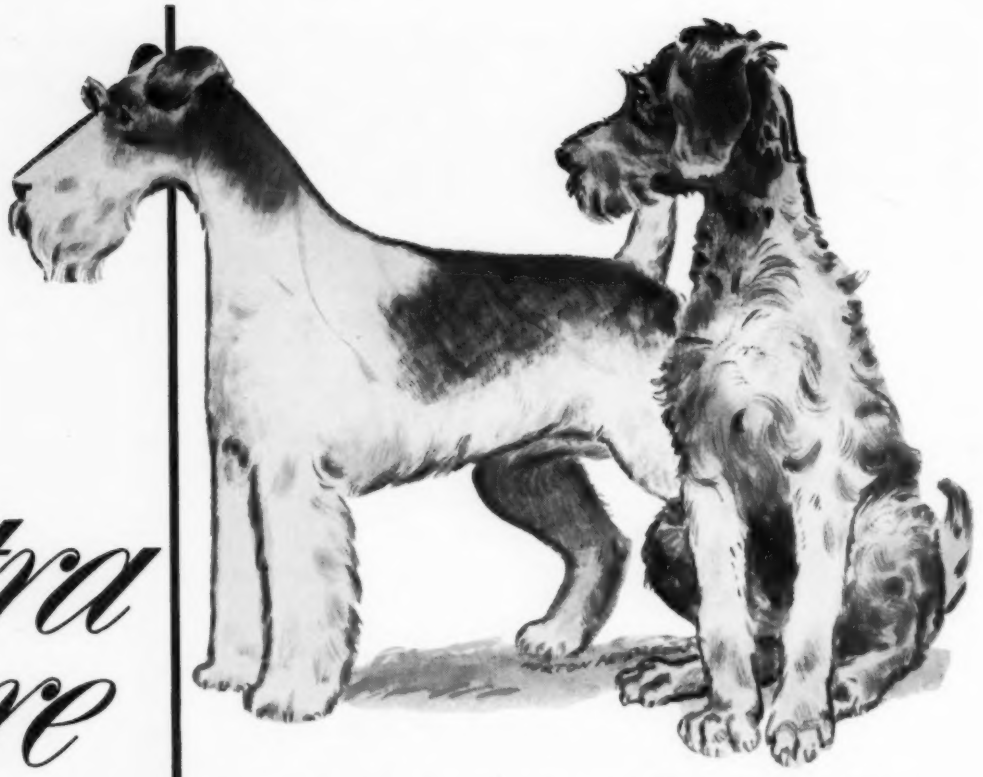

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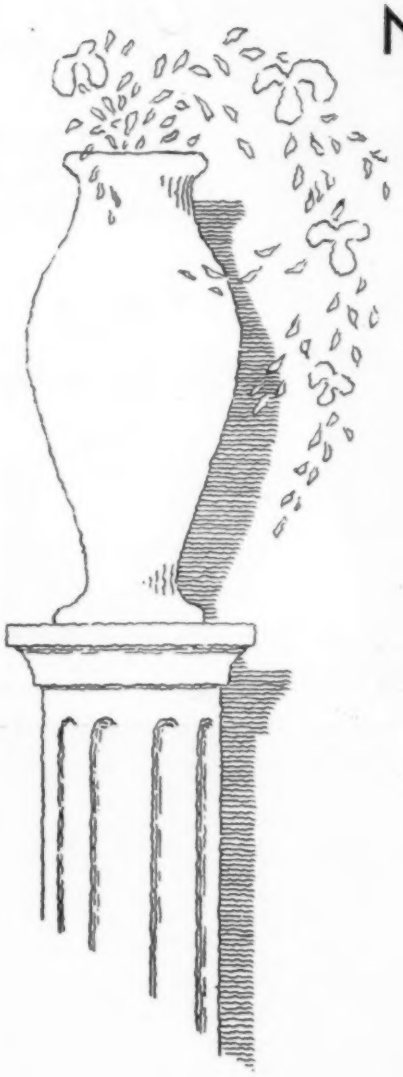

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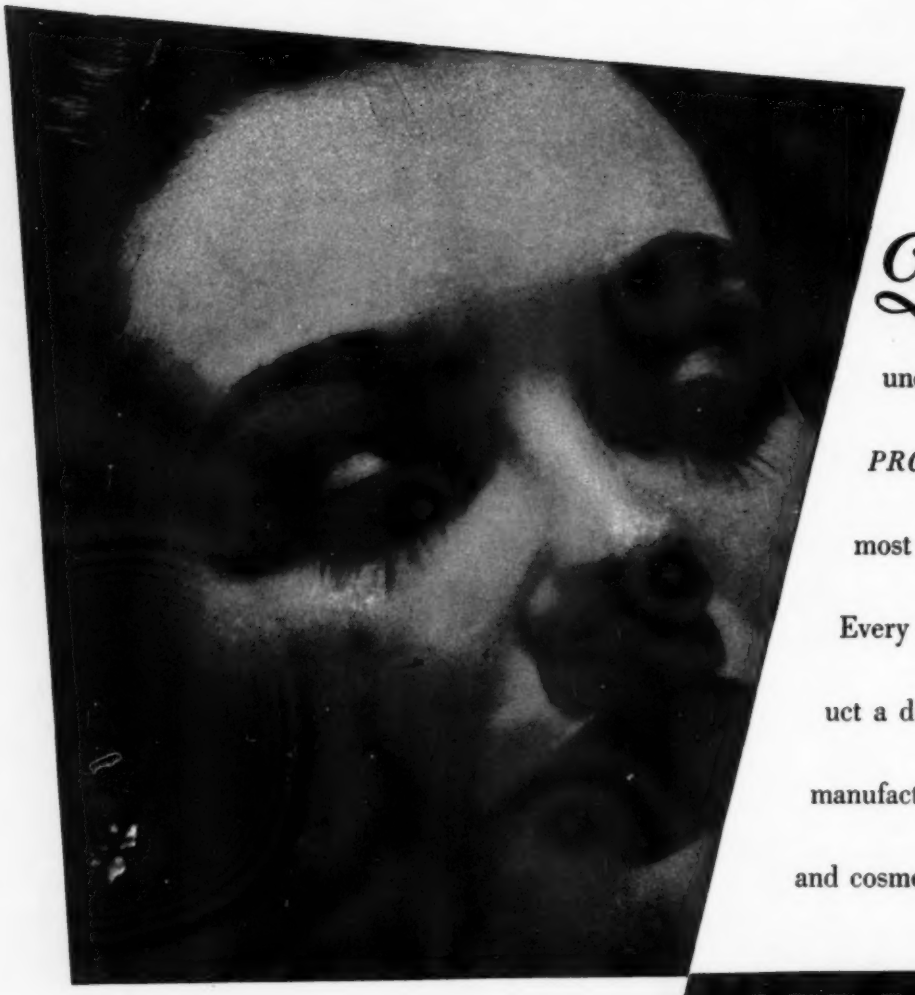

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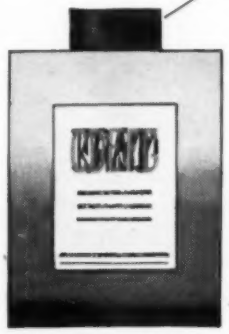
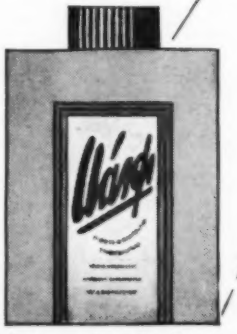
The EYE can stop the impulse to buy



Women hesitate to buy a product that has "settled out" and therefore has an appearance of poor quality.



The product that has an even distribution of color and body sells better because it has a quality look.

Give your product a quality appearance...with Kraystay

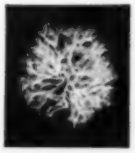
the finer vegetable stabilizer Kraft makes with carrageenin

That important first impression of your product is formed by its appearance. Many progressive manufacturers have found that Kraystay definitely improves the display value of their products . . . by giving them even and lasting distribution of color and body that lasts until those products are all used.

By varying the proportions, Kraystay will show unusual stabilizing, emulsifying, thickening, gelling or suspending properties in foods and pharmaceuticals of medium or low acidity.

Kraystay 16-8 is an excellent base for creams and pastes. When you add a small amount of potassium chloride, it gels at temperatures as high as 240° F. Kraystay 16-14 combines low viscosity with excellent gel strength.

To find out more about this finer vegetable stabilizer, simply call or write Kraft today. Kraft Foods Company, Dept. DC-11, 500 Peshtigo Court, Chicago 90, Ill.



GELOSE FROM THE SEA! The clear, pure vegetable gelose used in making Kraystay comes from these minute fronds of carrageen (edible Irish moss). Taken from the clean, cold ocean floor, they form the basis of this consistently efficient stabilizer whose uniform high quality is guarded by modern, scientific laboratory controls.

KRAYSTAY *made by Kraft*

A NEW DEVELOPMENT IN VEGETABLE STABILIZERS

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For really fine flowery fragrance—be it in creams, lotions, powders, or even extract or cologne strength—you will find that Floralie No. 21 gives amazing results at surprisingly low cost.

The price of Floralie No. 21 is $7.50 the pound or 60 cents the trial ounce, and only by actually examining this new creation can you really appreciate its outstanding value—perfume-wise and dollar-wise!

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We maintain our superior position as suppliers to the top manufacturers of cosmetic and beauty preparations, by the acceptance of the theory that research and improvement never end. One of our special services to the industry is close cooperation between the technical staffs of our company and yours, to raise the specifications of ammonium thioglycollate to the highest possible level.

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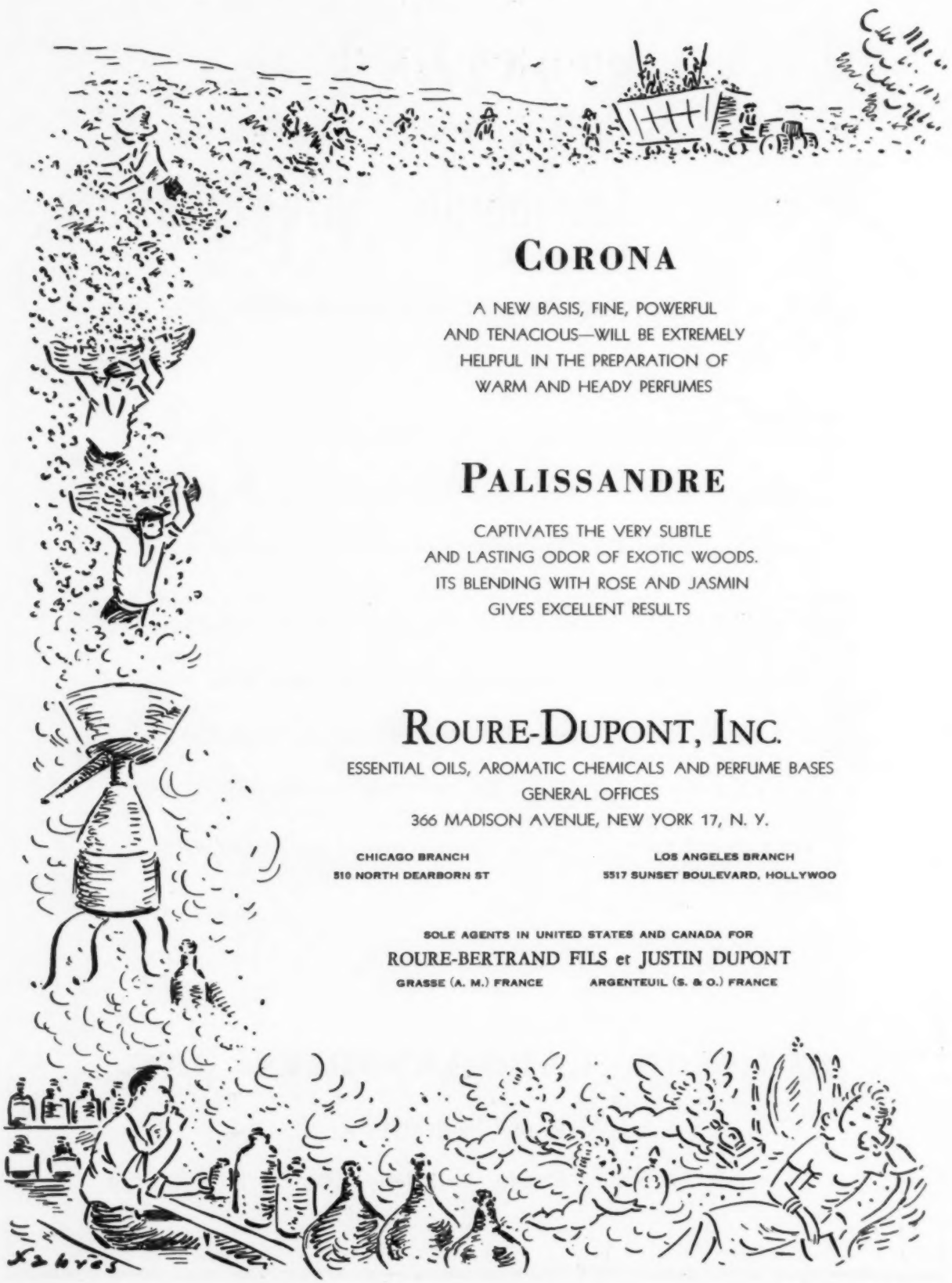

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Here's Your Latest "Formula of the Month"

...Another Guide to New Opportunities in Cosmetics!

The Atlas Formula *this* month is a W/O emollient-type cold cream that is delightfully soft . . . leaves no undesirable greasiness on the skin. And best of all, the Atlas emulsifier, Arlacel C, gives this cream *real stability* because of its unusual water-holding power. The incorporation of Arlex in the aqueous phase decreases greasy feel, while the soluble modified lanolin increases emollience.

Write for your copy of this valuable book on your company stationery.

W/O Cold Cream (Emollient Type)

A	Petrolatum	35.0%
	Mineral Oil 65/75	15.0%
	Paraffin Wax	5.0%
	Ceresin Wax	5.0%
	Lanolin	1.0%
	Arlacel 83	2.0%
	Atlas G-1425 Modified Lanolin	4.0%
B	Water	30.8%
	Arlex (Atlas commercial sorbitol solution)	2.0%
	Magnesium Sulfate	0.2%
	Preservative	q.s.
C	Perfume	q.s.

Preparation: Warm the oil phase (A) and water phase (B) separately to 70°–75° C. Add (B) gradually to (A) while stirring. Add perfume at 55° to 60° C. Homogenize at 55°–60° C. filling directly into jars.

This formula is typical of many you'll find in the Atlas book, Drug and Cosmetic Emulsions . . . formulas that offer you a guide to new opportunities in cosmetics. Here you find data that may help you improve an old favorite or that can lead to new and different products . . . helpful guides to the use of the versatile series of Atlas emulsifiers and other products.

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Practical experience proves that Beehive Brand Beeswax is more economical in the long run because it consistently produces emulsions that are stable and reliable under varying conditions of storage. We strongly recommend the use of the pure wax, though we are prepared to fill orders for beeswax compounds or synthetics, adjusted to the requirements of any manufacturer.

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KEEPING POSTED

The A.M.A. and Cosmetics

THE Committee on Cosmetics of the American Medical Association is finally feeling its oats after about two years of investigation. It will be recalled that less than two years ago this Committee, writing on the stationary of the Council on Pharmacy and Chemistry of the AMA, sought from cosmetic manufacturers information to allow it to accumulate "a complete file on information on cosmetics currently used." The Committee asked for a list of the manufacturer's products "with a narrative review of their chemical nature and such information on their properties as has been derived from animal and human experimentation." Samples would also be welcomed, said the Committee, which also promised to keep quantitative statements confidential, if so requested.

Now the Committee on Cosmetics has arrived—so far as the AMA is concerned—and has taken a step which we warned against about two years ago,—it has established a Committee seal, use of which will be permitted on cosmetics "that meet the rules of the Committee."

In typical AMA fashion this announcement is made at the beginning of an article in the March 26 issue of the AMA Journal in which the Committee on Cosmetics proceeds to kick the stuffing out of all manner of products for treatment of scalp conditions. Obviously picking out one of the most vulnerable class of products of the industry, and straying far afield from what would be considered the reputable and widely distributed products of the industry, the AMA apparently has attempted to throw a scare into the cosmetic manufacturers in an attempt to bring them under control of the AMA. Doubtless the Committee will follow this blast with others, probably picking another easy subject such as tooth pastes and dentifrices in general, trying to pick up something which the American Dental Association discarded as undersirable.

As examples of the phases of hair treatment preparations selected by the AMA for criticism, but which can hardly be considered either an integral part of the cosmetic industry or important in the marketing of cosmetics, we cite a long tirade against such organizations as: "The Thomas"; ultraviolet rays in hair and scalp treatment; mail order hair and scalp treatments; sulfonamide drugs in hair tonics; hormones in hair tonics; vitamins in hair tonics, mentioning specifically injections of vitamin B into the scalp—hardly a cosmetic treatment. The article deals at considerable length on the subjects of dandruff and baldness, but hardly presents anything new.

Cosmetic manufacturers might as well face the fact that the AMA is going to make an all-out effort to extend its control into the cosmetic field. There is no valid reason why the cosmetic manufacturers should allow themselves to be bulldozed by this Chicago group into helping to build up a censorship over its products by organized medicine. Manufacturers who use and advertise the seal of approval of this committee for competitive advantages will only be helping to put their own heads—and those of their competitors—in a vise.

There is no need for any such unauthorized censorship for cosmetics. The Food and Drug Administration has full authority over the formulation and labeling of cosmetics through the Food, Drug, and Cosmetic Act, and the Federal Trade Commission has full authority over the advertising of cosmetics through the Wheeler-Lea Amendment to the Federal Trade Commission Act. So far as the Committee on Pharmacy and Chemistry of the AMA is concerned, this is a body which can render a service to manufacturers of new drug products in certifying these products as useful before they are recognized in the official compendia. However, even this service has been greatly minimized by the new drug provisions of Food, Drug, and Cosmetic Act, and by the inclusion in the U. S. P. of patented drug specialties. But so far as cosmetics are concerned, the AMA has nothing to offer manufacturers, and cooperation with them in the activities of the Committee on Cosmetics would only benefit the AMA and would work to the detriment of cosmetic manufacturers.

Pears Soap Re-introduced

AFTER an absence of nine years Pears Soap is being re-introduced to the market by Schieffelin & Co., sole U. S. distributors of this Lever Brothers product. Distribution was commenced last month on an allocated basis. The product is made in England "according to the original formula by A. & P. Pears, Ltd., a Unilever subsidiary."

More Whale By-products

LARGER supplies of the by-products of whales, such as spermaceti, should be available on the market. England now has in operation some 20 ships catching and processing whales for the purpose of supplying England with whale meat which is canned on board the ship. This program is to supply Englishmen with more meat above their very small ration.

Some Financial Observations

ABBOTT Laboratories sales for 1948 totaled $66,930,712, an increase of 12 per cent over the 1947 total of $59,621,174. Net profit for 1948 stood at $11,120,983, or 16 per cent of sales, and 18 per cent over the net profit for 1947 of $10,216,165. The annual report of the company points out that "Abbott's record of earnings has been achieved in a period during which the average price of its principal finished products declined very substantially, while prices in general, including our costs for labor and material, greatly increased. "From a 1939 norm to the end of 1948, prices of principal Abbott products declined 22.7 per cent, while food increased 107.1 per cent, clothing increased 95.5 per cent, and the average for all items increased 71.2 per cent.

Sharp & Dohme sales in 1948 totaled $35,210,858, an increase of 16 per cent from the 1947 total of $30,307,241. Earnings in 1948 totaled $4,096,200, or 11.7 per cent of sales, and 24 per cent over the net profit for 1947 of $3,289,754. The annual report points out that increased costs and higher taxes continue to raise the breakeven point. To indicate this it is shown that in comparison with 1944, sales for 1948 have increased 31.1 per cent, while operating costs have increased 33.7 per cent, and earnings from operations have increased only 19.5 per cent. Also pointed out is the fact that the value of assets used per employee increased to $10,344 for 1948, from $6,948 for 1946, and $6,179 for 1940.

Parke, Davis & Co. sales in 1948 totaled $74,530,641, an increase of less than ½ of 1 per cent over the 1947 total of $74,188,229. Earnings in 1948 totaled $9,704,461, or 13 per cent of sales, and 11 under the 1947 earnings of $10,918,051. The annual report states that "Chloromycetin has proved to be highly effective in typhoid, typhus, and undulant fevers and certain types of infection of the urinary and intestinal tracts."

American Home Products Corporation sales in 1948 totaled $152,695,200, an increase of 9.4 per cent over the 1947 total of $139,522,957. Earnings in 1948 totaled $9,107,168, or 6 per cent of sales, and 37 per cent over earnings for 1947 of $6,624,179. Inventories of the Corporation were reduced during the year from $34,098,761 to $26,735,800, and the number of persons employed was reduced from 11,128 to 10,237. Stockholders increased from 13,997 to 15,133. Foreign business was 22 per cent of the total.

Merck & Co. sales for 1948 totaled $72,904,214, a gain of 7 per cent over the 1947 total of $68,302,848. Net income for 1948 totaled $8,520,250, or 11 per cent of sales, and 33 per cent over net income for 1947 of $6,397,940. During 1948 $9,300,000 was spent for additional facilities and improvements to existing facilities. At the year end there remained $7,800,000 to be expended on plant facilities previously authorized. Direct export sales amounted to $15,100,000, or 21 per cent of sales in 1948, compared with $11,600,000 in 1947. Export sales are largely accounted for by penicillin and streptomycin.

Sales of Chas. Pfizer & Co. for 1948 totaled $47,759,263, a gain of 21.8 per cent over the 1947 total of $39,215,281. Earnings for 1948 totaled $9,587,060, or 20 per cent of sales, and 2.5 per cent over earnings for 1947 of $9,346,266.

Health Care and Taxes

WE have long been of the firm opinion that the plans to extend the social security program of this country to include, among other additional "benefits," compulsory sickness insurance, was nothing more or less than a plan to obtain greater amounts of money from the citizens of this country through a greater payroll tax. Certainly the fact that money obtained through these taxes have always been immediately spent for current Government needs, and is not set aside for the purposes for which it was intended, indicates that such is the case. Now we come across a discussion of the introduction in Germany of a program of compulsory sickness insurance late in the nineteenth century when Bismark was Chancellor. We read:

"Bismark was not particularly interested in whether or not the people received medical care. His first thought was to get the money into the Treasury, and the benefits to be received by the people would come later. To him, political control of the medical care system meant putting considerable money into the hands of the Government and a more firm control over the lives of the people."

Here we have the truth of the situation facing the people of this country today. Compulsory sickness insurance, offered to people as "free" medical care, is an approach to additional taxation which the large majority are most apt to favor and which is extremely difficult to defeat. However, we may be certain that the only thing back of this plan is to get more taxes flowing into the Treasury, and the degree to which medical care will be made available will be determined later. In the meanwhile, the proponents of the plan will promise as much as is necessary to get the public to fall for the scheme.

If the Government was at all sincere in its desire to permit the people of this country to obtain medical care with the least burden, why was the demand for deduction of medical expenses under the income tax never allowed? For years it was pointed out that industry was allowed to deduct costs of repairs too, and replacements of its plants and equipment, and to deduct for depreciation and depletion. When the Government finally did grant an allowance for medical care in the income tax, they granted one that is very seldom available to most people and covers only cases of catastrophic illness for which people in the lower income brackets cannot readily pay anyway. The normal medical expenses they are not allowed to deduct because the expenses are only deductible to the extent that they exceed five per cent of the gross—not net—income. Then there are other innumerable taxes which people pay on the multitude of things which enter into medical care. As one shining example, alcohol used in medicines bears a tax of 17½ times its value even after the manufacturer receives his drawback.

We just cannot bring ourselves to the point of believing that the Government of this country is sincerely concerned with the health of the citizens of the country. And if the basic facts of the situation could be instilled in the public mind, the receptive attitude exhibited toward compulsory sickness insurance would vanish over night. However this is an educational job that would require more time and facilities than appear to be available.

FTC Cosmetic Hearing

AT THE second hearing before the Federal Trade Commission on the proposed Fair Trade Practices Rules, only one witness addressed himself to the Layton proposals which were the cause of this second hearing. It will be recalled that a hearing was held on February 10, which was supposed to be the only hearing. However, at the end of this hearing, Philip Layton, an attorney with the Litigation Division of the Commission, read into the record what amounted to a completely new set of rules which the members of the industry had not heard of before, and which they had no chance to study and to answer. Hence a request was made for another hearing to answer these proposals. This hearing was held on March 24.

The only one to discuss the Layton proposals was Samuel Lane, an attorney appearing for Richard Hudnut. He discussed the Layton proposals and then raised the question of the legality of Mr. Layton's appearance at the hearing. Mr. Lane advanced the belief that only manufacturers, distributors, and users of cosmetics had any right to appear at the hearing. He said that Mr. Layton was not a manufacturer, not a distributor, and—as far as Mr. Lane knew—not a user of cosmetics or toiletries. Therefore, Mr. Lane requested that Mr. Layton's statements be striken from the record, adding that if this were done, his own remarks with reference to Mr. Layton's proposals should also be striken from the record.

Herman L. Brooks, appearing as chairman of the Voluntary Industry Committee, stated that about ten days before the hearing a survey of the industry with reference to their desirability of having rules issued by the Commission was conducted. He said that 1,850 cards had been mailed to manufacturers from Coast to Coast. He stated that since the Toilet Goods Association had only 390 members, it could be seen that this survey covered the entire industry. Mr. Brooks said that up to the day before the hearing, 158 replies has been received. Of those sending in replies, 108 said that they were in favor of the issuance of rules by the FTC, and 41 said they did not favor the issuance of rules. In answer to the question whether or not they favored the rules as issued by the Commission and amended by the Voluntary Industry Committee, 105 said they were in favor of these rules, and 35 said they were not in favor of them.

Hoover Commission Wants Ads to FDA

THE Hoover Commission on Organization of the Executive Branch of the Government has recommended that control over advertising of foods, drugs, and cosmetics, which now rests with the Federal Trade Commission, should be transferred to the Food and Drug Administration. A task committee of the Hoover Commission could find no basis for continuing the conflict in jurisdiction which, the committee said, has created difficulties in spite of efforts of the two agencies to coordinate their work. Stipulations on advertising accepted by the FTC have precluded proceedings by the FDA against similar labels, and testimony given before the FTC has led to constitutional immunity in court proceedings brought by the FDA.

"At present most of the responsibility in the food, drugs and cosmetics industries is held by the Food and Drug Administration which has a substantial staff, research laboratories, and field agents," said the committee. "A small fraction of the work is lodged in the Federal Trade Commission, which has no research facilities, no field staff, and only three technical specialists. Since the technical problems are dominant in the investigation of false advertising, it is recommended that the area of false and misleading advertising of foods, drugs and cosmetics should be transferred to the Food and Drug Administration."

The recommendations appeared in a report of FTC activities in which the Commission was sharply criticized for not carrying out its original purposes. The FTC was meant to be the strongest of the Federal administrative agencies. By continuous, expert attention it was expected to adapt and apply the general terms of the statutes to the current business practice and to build up a body of precedents to government business conduct.

"Measured by these high hopes, the Commission's record is disappointing," the committee reports. "The reasons have been various. The Commission has been hampered by inadequate funds, hostile court rulings, mediocre appointments. Its operations, programs, and administrative methods have often been inadequate, and its procedures cumbersome. It has largely become absorbed in petty matters rather than basic problems. Over the years, the Commission has engaged mainly in activities contributing little toward accomplishing the primary Congressional objective of assuring widespread, effective competition. In the past this has been particularly true of its proceedings for orders to cease and desist.

"Approximately 70 per cent of the cases have involved false and misleading advertising and deceptive practices. The remaining 30 per cent have been concerned with price discriminations and anti-competitive practices, yet the bulk of even these cases has been minor in importance, involving small corporations of little consequence to the national economy."

Drugs for the Aged

IN SPEAKING on the "Outlook for Improved Drug Therapy in Geriatrics," Dr. Chauncey D. Leake, of the University of Texas Medical Branch, states that improvements in the following would be helpful:

1. Drugs that may prevent or cure cancer.
2. Drugs that may alleviate the symptoms of cardiovascular-renal disease.
3. Drugs which will improve the activity of the reticulo-endothelial system and promote greater resilience of tissue and greater protective action from the lymphoid, blood forming, and connective tissues.
4. Drugs which may reduce sensitivity to sensory annoyances, produce some degree of euthoria, and relieve muscle tension, without inducing incoordination and drunkedness.
5. Drugs which may stimulate brain activity, without inducing nervousness, restlessness, irritability, or increased muscle tension.
6. Drugs which may maintain the functional activity of the gastro-enteric tract so as to promote the enjoyment of eating.
7. Drugs which will maintain the functional enzyme systems of cells generally so as to keep metabolic processes in a satisfactory condition.

Salt Substitutes Are Drugs

THE Food and Drug Administration has now classified salt substitutes as drug products, instead of considering them as foods. This is because of disastrous results of the ingestion of lithium chloride when certain individuals used this material instead of ordinary salt. The FDA seems to be on a firm basis in thus classifying salt substitutes since they are for use in cases in which the use of salt is dangerous to a person in a diseased condition. Thus these products are used for the cure, alleviation, or treatment of disease. Certainly no one would bother to use a salt substitute unless he had been advised against the use of salt by a physician, and in most instances a salt substitute is definitely advised or prescribed by a physician. Under this ruling, manufacturers marketing salt substitutes will have to file new drug applications and will not be allowed to market these preparations until these applications have been processed and permission is granted.

Questions Statement

WITH reference to an article, "50,000 Ways to Sell Cosmetics," published in our February issue, we received under date of March 21, the following letter from Harvey Isaak, Managing Director of the Physician Prescribed Cosmetic Laboratories, Inc., Mount Vernon, N. Y.

"I read with a great deal of interest your article in the February issue on '50,000 Ways to Sell Cosmetics.' Of particular significance to me was the sentence, 'The Company who sent clinicians to fill out long tedious questionnaires, which would then be analyzed by a consulting physician who would prescribe suitable cosmetics, found also that the unit sale would not support this cumbersome chain.' As far as we know, we are the only cosmetic firm which actually has a dermatologist prescribing for our patrons, on the basis of a Case Record (long tedious questionnaire?) which our representatives fill out with the patron. We are happy to report that we have been operating successfully going on seventeen years now, and our sales organization is alive, kicking and growing. Our patronage extends throughout the 48 states. As for the size of the unit sale, by thorough training of our sales organization the idea of presenting the advantages of a full service and not just a single item, we have managed to keep it sufficiently high to support this 'cumbersome chain.' In regard to the 'long tedious questionnaire,' our patrons seem to love it."

Molasses Market Firms Somewhat

DURING March things happened in the molasses market which might well have an influence upon the price of ethyl alcohol. First one important factor in molasses for many years bought 28 million gallons of molasses at 4 cents per gallon at Cuba. It is said that he was guaranteed against price decline by an agreement that if lots of less than 10 million gallons were sold at a later date at 4 cents per gallon, his purchase would be repriced at 3½ cents per gallon.

During the week following this deal, a purchase of 54 million gallons at 4 cents per gallon was concluded by the distiller who formerly had a contract based on the market price for alcohol. This contract, which covered slightly more than 80 million gallons was cancelled by the Cubans. Now this distiller has bought at a firm price. It is estimated that he had taken in about forty million gallons under his first contract an average price somewhat above the 4 cents he paid for the present lot of 54 million gallons. It is reported —but not confirmed—that in buying the present lot, he had the purchases under the sliding scale contract repriced at the 4 cent level.

Still another lot of 10 million gallons was sold for 4 cents a gallon to a buyer in this country who is marketing it for stock-feed purposes. These sales were made in the face of general bidding by other distillers of 2 cents per gallon. After these deals were completed, the Cubans said that sales to other distillers would be made only at 4 3/4 to 5 cents per gallon.

Molasses priced at 4 cents per gallon indicates an alcohol market of about 30 cents per gallon. This is arrived at as follows: Molasses at 4 cents at Cuba means 6.75 cents per gallon here because of 2 cents per gallon freight, and 3/4 cent per gallon duty. Two and one-half gallons of molasses for one gallon of alcohol therefore costs 16 7/8 cents. Adding to this 6½ cents per gallon of alcohol for conversion cost, we get a cost of 23 3/8 per gallon of alcohol naked at the distillery. Adding to this the cost of 5 cents for freight, we get a cost of 28 3/8 cents per gallon not allowing for packaging, selling, and overhead costs.

Thus it would appear at the moment that the alcohol market is due for an upward turn. However,one must face the fact that Cuba faces a molasses crop of 300 million gallons with a carryover of 50 million gallons. This means that the Cubans must get rid of 350 million gallons this year, and so far only 92 million gallons have been sold. A wide extension in the use of alcohol can be anticipated as the result of the lower prices of the past three months, and this might make the molasses picture a little firmer than it would otherwise be. However, the distillers for the most part are playing a waiting game and it remains to be seen whether or not the Cubans will weaken when finally they have to move more molasses. If they cannot move the molasses and are pinched for storage tanks, as will soon be the case, they will run the molasses into ditches lined with waxed paper. The ditches are covered to keep away the flies, and the molasses can then be recovered at a later date.

The molasses market appears far from strong at this time, and higher prices appear to be quite out of the question. The main question is will it stay where it is or go lower as supplies pile up in Cuba and distillers in this country play a waiting game in a market that is already sharply curtailed by the increases in production of alcohol by synthesis of petroleum gases.

Those Trade Associations

THE number of trade associations in this country kind of caught up with us last month. We received an envelope bearing the sender's name as Frequency Modulation Association, 526 DuPont Circle Building, Washington 6, D. C. Expecting to be told something about the activities in the field of frequency modulation, imagine our chagrin when the envelope contained a copy of the "Single Service News, by the Cup Reporter," distributed by the Field Research, Paper Cup and Container Institute, Suite 1901, 551 Fifth Ave., New York 17, N. Y. Sure enough, the envelope bore a New York post mark. We don't know if the people who operate these associations are unable to keep them straight, or if the one association ran short of envelopes and borrowed some or picked up a job lot somewhere.

Wood Waste and Alcohol

WE NOTE that Representative Ellsworth wants the Government to complete the plant at Springfield, Ore. for production of alcohol from wood waste before disposing of it as war surplus. Having spent $3,000,000 on the plant, Mr. Ellsworth believes that the Government should complete the plant and test the process. "When the plant is completed and the process proven to be a sound commercial venture, it will be possible for the Government to sell or lease it and thus regain all of its investment in the plant. To junk the plant now would mean a huge loss of money and a delay of many years in developing a means of wood waste utilization."

We are certain that Mr. Ellsworth has not followed the alcohol market during the last three months and that is hardly acquainted even slightly with the position of the molasses market and its relation to alcohol prices. To spend a plugged nickel at this time on such a plant would be throwing money down the rat hole. We're sorry about Representative Ellsworth's desire to help out his home State, but the plant had better be sold for junk and the rest written off.

Rheumatic Drugs Available

GENTISIC acid and sodium gentisate, products chemically related to aspirin, have shown promise in the treatment of rheumatic disorders, and now available to the pharmaceutical industry in limited quantities, says Monsanto Chemical Company. It is believed that gentisic may be the chemical produced by the body from sodium salicylate, which has long been used in the treatment of rheumatic ailments. One theory is that gentisic acid inhibits the action of an enzyme in the body. Although data to prove this theory is still insufficient, it is thought that this enzyme destroys the body's tissue cement, causing the pain, swelling, and high temperatures associated with rheumatic diseases. Dr. W. G. Krummrich, general manager of Monsanto's Organic Chemicals Division, warns that extensive work remains to be done by pharmacologists and clinicians before the utility of the products is fully established. The chemicals are being made available for research on the broad scale necessary for such development.

Uranium and Power

ABOUT 10,000 tons of uranium would produce the present yearly electrical power of the entire world, according to Dr. Robert F. Bacher, one of the four atomic energy commissioners. This is more than 10 times the amount the entire world was producing during the war. How much is being produced now is a secret. One thousand tons could make 17 per cent of the electric power used in this country in 1947.

FTC Refuses Rules to Renderers

WE DO not pretend to know what action the Federal Trade Commission will take with reference to the Fair Trade Practices Rules for the cosmetic manufacturers, but we note that the Commission had decided not to issue any rules for renderers. After a general industry practice conference followed by public hearings and consideration of proposed trade practice rules, the Commission concluded that issuance of rules "would not be in the public interest."

FDA Stops Urethane Cough Syrup

THE Food and Drug Administration acted quickly to prevent distribution of a cough syrup containing urethane as substitute for codeine. Urethane, an old-time drug known to doctors as a sedative, was not used in a cough syrup until Dr. Marvin R. Thompson—formerly a pharmacologist with the FDA—placed Syrup of Urethane on the market last Fall. According to an FDA official, "Urethane in the quantity on the cough syrup label may cause a dangerous lowering of the white blood cell count of those who take it. The white blood cells are the body's defense against germ infection and lowering their number leaves the cough sufferer more liable to additional infection." Thompson based his use of the drug on experiments which showed that 8 grains of it had the same effect on the cough nervous reflex as $\frac{1}{8}$ grain of codiene. The company was said to have distributed 2,300 gallons in 34,000 bottles.

Aspirin, Antibiotic and Other Output

ASPIRIN production in 1948 totaled 10,762,853 pounds, which if all made into 5 grain tablets, would have produced 15,067,994,200 tablets. Taking two tablets to a headache, these tablets would have relieved over 7½ billion headaches. If that number of tablets was consumed in this country, it would mean 50 tablets per capita, or about one a week for men, women and children, which just didn't happen.

Barbituric acid derivatives produced in 1948 totaled 374,113 pounds; sulfa drugs, 2,403,206 pounds; ascorbic acid and salts, 830, 528 pounds; niacin and niacinamide, 879,749 pounds; thiamin chloride, 189,727 pounds; pyridoxine, 9,962 pounds.

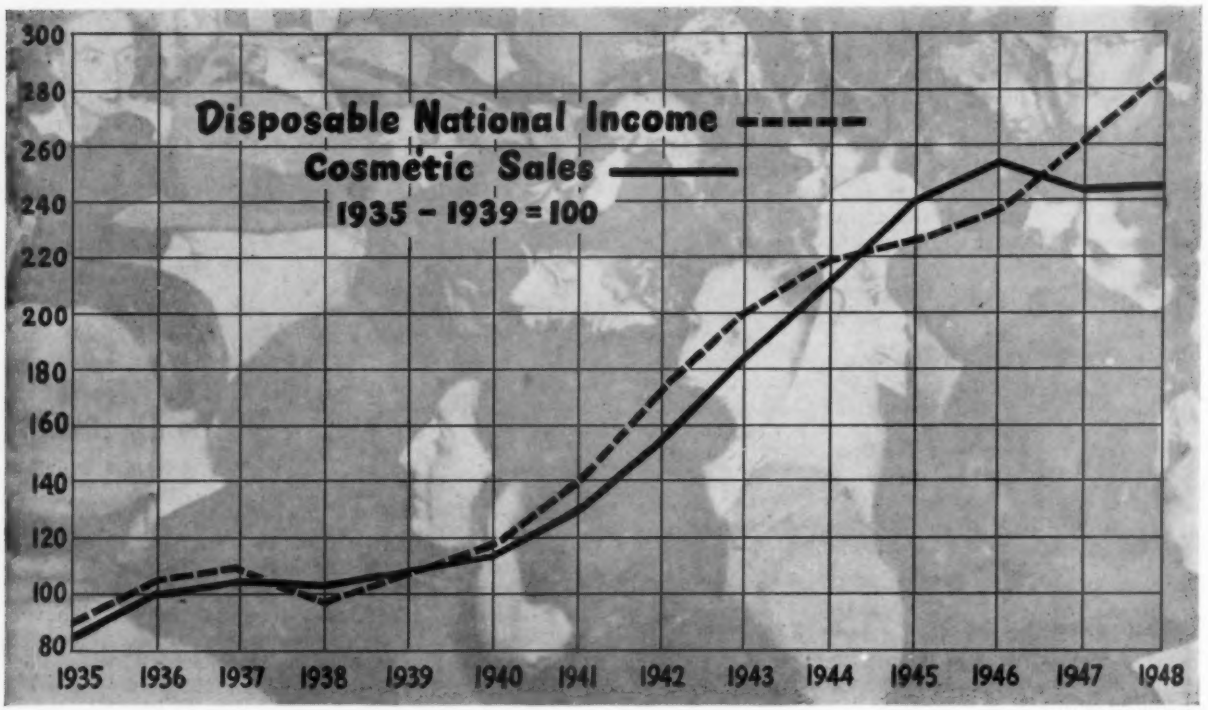
Penicillin production during 1948 totaled 94,132,289 million Oxford units. Figuring this all as penicillin G, which contains 1,667 units to the milligram, we get a production of 56,470 kilograms, or 124,234 pounds, or 62 tons. Streptomycin production in 1948 totaled 37,709,160 grams, or 37,709 kilograms, or 82,959 pounds, or 41 tons.

Seventh Generation of Schieffelins

SCHIEFFELIN & Co.—the oldest drug house in America—recently elected to its board of directors, William J. Schieffelin III, the seventh generation from father to son since the founding of the company in 1794. Mr. Schieffelin has been assistant vice president of the pharmaceutical and research laboratories. The company makes more than 800 drug products. Also elected a director was F. H. Osborn Jr., of the Philadelphia banking firm of W. H. Newbold's Son & Co.

Dublin on Health Conditions

ACCORDING to Louis I. Dublin, of the Metropolitan Life Insurance Company—which company some one remarked has a selfish interest in trying to keep people healthy—"The American people were never healthier than in 1948 and the prospect is for continued improvement in 1949. Mr. Dublin added that the 1948 death rate established a new low of less than 10 per 1,000 population. "This unprecedented record, "he says," was achieved despite changes in our population structure, such as a large increase in the number of infants and a rise in the proportion of old people. Seems as though medicine in this country isn't doing too badly by the average individual.



WIDE WORLD

Factors Influencing Cosmetic Sales

By FRAZER V. SINCLAIR

THE most significant thing about the cosmetic industry is that it is not in any sense a cylical business. The historically steady growth of perfume and cosmetic usage and sales has been based primarily on the continual increase in disposable national income. The factors represented by increasing disposable income, such as increased employment, increase in population, increase in social standards and social enjoyment, and more indirectly the progressive development of such things as automobile ownership, availability of motion pictures and many other factors have permitted a continuous development of social intercourse.

The two factors upon which the use of perfumes and cosmetics primarily depend are a disposable income which permits the purchase of these products above the bare essentials of living—dwelling, adequate food and clothes—and social intercourse. By social intercourse we mean basically the ability to meet and mingle with people which activity brings with it a resulting self satisfaction in personal appearance.

During the last twenty-five years there has been a remarkable growth in social intercourse in this country. Through continually expanding good roads, the automobile and other methods of low cost and rapid transportation, the barriers which once lay between the farm and the small town and again between the small town and the city, have been largely eliminated or minimized. Other factors have been the continually increasing ratio of employment of women in factories and offices, the effect of motion pictures in making vivid the lives and social habits of other people, particularly the glamourizing of these lives, the growth of magazine and newspaper circulation which accomplished this same purpose, and many other factors which, added to an increasing national income, have been a continual stimulus, calling practically every year for expanding production of perfume and cosmetic products.

Evidence that cosmetics and fragrances are not cyclical is most clearly revealed by a study of the sales of these products during the depression years of 1930 to 1935. Actually, except for a slight decrease at the beginning of this period, the use of cosmetic products

substantially increased throughout these years. It is true that for economic reasons during that time the price of cosmetics decreased and the purchase of fragrances switched to a considerable extent from perfumes to the floral colognes. Also this was the period in which cosmetics first appeared and attained high volume in the variety stores.

While during this period there was a slight decrease in the dollars spent by consumers for all cosmetics and perfume products, the facts are that there was a substantial increase in the number of units or packages purchased by the public. Even in the higher or prestige brackets of the cosmetic industry, decline in dollar sales showed a stability not equaled by other products in retail stores.

In a study called, "The Behavior of Consumption in Business Depression" by the Harvard Graduate School of Business Administration, it was found that toilet articles sustained their volume in department stores better than any other product, except "maids" and nurses uniforms." In this detailed study of sales by departments in department stores using dollar sales of 1928 as an index of 100, toilet articles fell in 1932 to an index of 87. In this year silks and velvets fell to 47, linens to 62, notion to 69, silverware to 57, jewelry to 46, books and magazines to 65, gift shop to 47, china and glassware to 54, home furnishings to 55. In the entire store the only department that did better than cosmetics was that of maids' and nurses' uniforms which rose to an index of 105.

The stability of perfumes and cosmetics to avoid cyclical changes is based upon the ability of these products to become primary social necessities once their use is established. This has been clearly evidenced in numerous surveys and investigations and in many startling incidents in Europe during the severe rationed periods of the war. One of the most interesting surveys of this sort was made a few years ago by the magazine, "Printers' Ink." In this survey a professional research organization was employed to interview a considerable number of women who were asked to examine a list of about 60 products, including both luxuries and necessities, and to cross off one by one the products which they would give up under strained economic conditions. In this survey it was surprising to note the food products and the variety of apparel, which could not be classed as basic essentials, which were crossed off early in this list. It was even more significant that among the last five products that remained in this elimination contest, three were cosmetic products.

The perfume and cosmetic business has just passed through one of those historic periods, that is a war, during which the social conditions that prevailed enormously accelerated the informed-use of cosmetics. The effect of periods of this sort has always been to give an enormous stimulus to the use of perfumes and cosmetics, and this stimulus has historically proved largely permanent. The factors which brought about a great expansion in the consumption of cosmetics and perfumes during the period of 1940 through 1945 may be classified as:

(1) Very large increases in employment, in national income, and in individual disposable income.
(2) A very large increase in social intercourse as a result of this increasing income and because several million additional women were drawn from homes into the crowded social atmosphere of factories and offices.
(3) An increase in total population that in the United States equaled the entire population of Canada.
(4) A determined popular insistence for increased standards of living.

During the last few years certain temporary factors have operated to halt for the time being this sustained trend. That these factors have been infinitely more severe on the manufacturer than on the retailer is shown by the fact that excise tax collections on perfumes and cosmetics and other factual reports, such as Federal Reserve Bank indexes on toilet goods sales, prove conclusively that there has been only a slight drop in the number of dollars spent by the consumer for cosmetics and perfumes.

The facts of this situation are well-known to the industry. The accelerated production of the war years by established cosmetic companies and by the entrance of a vast number of new companies finally in 1946 materially produced a large abundance of these products over and beyond the normal, expected, consuming ability of the public.

The last two years have constituted a period in which the retailer has been unloading this excess production brought about by the distressed goods of manufacturers going out of business and the overweighted inventory in retail stores and manufacturers' warehouses in the brands of strongly established cosmetic companies. There is little doubt that in each of these years, very close to $100,000,000 worth of perfumes and cosmetics, which could be classified as distressed merchandise, has been sold to the public by retail stores which have reduced their purchases to manufacturers by approximately this amount. If we consider the very large volume of distressed merchandise sold at drastically reduced prices and the plain facts of the excise tax reports,—that, consumer investment in dollars in cosmetics was reduced very little—then we must conclude that over the last two years consumers have actually purchased a considerably larger number of perfume and cosmetic packages than they purchased even during the best period of the war years.

The chart which we show with this article is a revealing story of perfumes and cosmetics and a reassuring proof for the industry. This chart shows that the purchase of fragrances and cosmetics by the American public is closely and historically tied to the disposable income available to the public. The fact that these two lines after closely paralleling each other for so many years have wandered in opposite directions for a brief period of 18 months is indicative of nothing but the

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SOMETHING FOR NOTHING

By FRANCIS CHILSON
Industrial Consultant

THERE is much you can get for nothing in developing a plant and a business if you spend your money wisely and constructively. It has been said that this is an era of sales and that production, now that the war is over, no longer occupies the center of the stage. But that is a dangerously fallacious attitude, because this, as the era of sales emphasizes the role of production in providing better quality products at lower costs in spite of steadily increasing costs for labor, materials and services. Factories exist only to service the sales department. The sales department pays our salaries; we exist through and for the sales department only on the premise that we can produce the kind of products needed at the required time and at prices lower than similar products can be bought elsewhere. A plant has a right to existence only if it can compete advantageously in quantity, quality, price and service with other plants making the same products. Practically everything sold in the drug trade can be bought from private formula houses. There are many successful drug firms in operation which never have had plants of their own. I wish every plant man to remember that he justifies his job, only if he produces for his sales department goods and services which could not possibly be obtained elsewhere on a better basis. All production men should remember that when the sales manager demands what seems to be an unreasonable amount of service and unreasonably low costs, that other sales managers, with whom the sales manager is competing, are receiving the kind of goods, services and costs which he demands or he wouldn't demand it.

In order therefore to provide our sales managers with what they must have to hold their own in the fierce competitive battle that is now raging and intensifying every minute, you must consider all the necessities of production from the moment you locate a plant site, all through construction and the various stages of manufacture, packaging and distribution, and you must, moreover, project your requirements for the next twenty-five years at least, for that is but a very short time in the life of a business or a plant. During that twenty-five years I wish you to remember that each year you will be required to produce at a constantly lowering cost level because the economic foundations of our industry are changing and the almost certain advent of some form of socialized medicine will change them some more. The fantastic profit levels our industry has hitherto enjoyed are doomed. The days when a specialty house could earn net profits before taxes of twenty to thirty per cent are numbered. The industry is now a mass production industry and under the impact of intensified competition and socialized medicine it will become more so. In mass production industries you do not reckon your profits in dollars per dozen but in cents, and not many cents at that.

We can get a great deal for nothing when we locate a new plant site; we can get a great deal for nothing when we build a plant. I realize that the industry is leveling off, that many of you will never be called upon to participate in a new construction program, that many of you will never enjoy enough increase in volume to modernize the premises you now occupy. We can't all build and we can't all expand all the time.

Yet, there are several important reasons why you should maintain alert open minds and assume you will go on growing indefinitely. The first is that a refusal to recognize any limits to the growth of your business is very stimulating to the ego and hence, stimulating to the morale of your organizations—it keeps you on your toes. The second is that a very careful study of plant site factors, building type, expansion possibilities, equipment and layout, even to the extent of making the actual drawings as though you were going to proceed with a new project immediately, is the surest way of discovering in detail what is wrong with your present set up. Assuming no limitations of money, time or opportunity, the creation of an ideal layout on paper establishes an invaluable yardstick for the measurement of present inadequacies and you will be surprised by the number of elements which can immediately be adapted to your present organization. You will be surprised by the number of details you discover about your own processes that you didn't know before. You will discover how utterly uneconomic and illogical some of them are.

Now, to begin at the beginning, let's look for a plant site and let's see what we can get for nothing. The initial step comprehends a careful analysis of company policy, the present ownership of the business, future plans and aspirations, the location of existing and probable future markets. Excepting in the few instances where firms are dependent upon stockyards for their principal raw materials, the location of raw material sources is not in the drug industry, a consideration of prime importance. Drug industry raw

materials are widely available and transportation facilities in this country are not only extensive and fast but are improving in character and speed.

As a primary consideration in this industry we can, I think, rule out branch plants because only a few firms have, and fewer will ever get sufficient volume to justify the establishment of branch plants on an economical basis. Many of the firms do operate, for economy and service reasons, branch warehouses and there is every reason to believe this policy will continue. It seems to me however that cooperative manufacture will play an important role in future drug operations as smaller manufacturers unite to offset the economic power and competitive pressure of the large firms. Thus a Los Angeles firm might manufacture the products which a New York competitor distributes in the Los Angeles territory, in exchange for a similar service on the part of the New York competitor in making products the Los Angeles manufacturer wishes to distribute in the New York territory. It is not beyond the bounds of economic possibility that competitive firms might unite in the ownership of strategically located manufacturing plants in which and from which their products could be manufactured and distributed.

These future possibilities are pointed out to indicate the kind of solid, farseeing thinking which must go into the establishment of an initial operating center. Once a commitment is made and a substantial investment is established, a certain degree of inflexibility is inevitably created and from that initial decision there may be no future recourse. I know many firms in the trade whose headquarters are not in the right places, who would give a lot to be elsewhere, even in their own towns, but they are immobilized by major investments which cannot be junked. In other words their bedrock costs are pegged at a higher level than they should be and their ability to render trade service at competitive costs is impaired. Hence their locations are to this extent millstones around the necks of their sales departments and under existing and future competitive conditions, the weight of those millstones will get heavier and heavier.

In view of all these actual and possible conditions the first axiom to be observed in making the initial location is to spend the minimum for the site and for the plant which is to be built upon it. Here's where getting something for nothing comes into play.

There are many communities that are so desperately in need of new industries to maintain local economy, that they will give you a plant site for nothing. Some not quite so hard up but still receptive, will cancel all taxes for a period of years. Some will extend service lines: water, gas, sewage and power lines not only to the site but into it at no cost to the prospective builder. Some communities will build roads to and into the site at no cost to the manufacturer. Some communities actually will build plants to your specifications and then lease them to you for a considerable term of years at a nominal rental. Where are such communities? They are all over. But all such considerations should be carefully weighed because a bad location might someday be economically disastrous even if you got the plant for nothing. The best procedure is scientifically to select the community and then sell the community authorities a bill of goods on your desirability, so that you can squeeze out of your investment every possible penny before you make the initial payment. This procedure has been followed in thriving industrial communities where one would suppose the local authorities would be indifferent to the establishment of new plants. But you'll never get anything unless you ask for it.

Water is of paramount importance in the drug industry and, as air conditioning is now the rule if not an actual necessity in many plants, the presence of an adequate supply of cold pure water beneath the site is a feature for which you do not have to pay a nickel. Purchased water always costs money even if the supply is adequate and when it is not pure enough for process purposes additional treatment costs still more money. If the water is too warm and you have to chill it refrigeration costs money. And all these extra costs remain forever with you as an element of irreducible overhead. When pure cold well water is available on the site you have an asset, which costs you nothing, but is of inestimable value if you ever need it in large quantities. Remember this when you think of water supplies: water tables are dropping all over the country and urban areas are rapidly increasing their consumption of water. The day of acute water shortage in many urban areas is not far off and in many communities it is a serious problem right now. I realize that in many parts of California especially in the southern part well water is not available at all; in other parts well water is brackish and warm and would require excessive treatment to make it usable. But water is a basic necessity in the drug business and if you can obtain access to an adequate supply you may have an almost priceless asset.

A railroad siding or the possibility of one is another asset for which you need pay nothing. You may never need a railroad siding; many of the firms in the trade never have because of the availability of excellent trucking services, but if the volume or complexion of your business changes, as in some cases it will, a railroad siding on the premises could be a priceless asset. It's the sort of thing you can do without, but all other factors being equal you should get it if you can do so without paying for it. If you haven't a siding and you refuse to believe you will ever need one, please remember that someday you may be faced with an unnecessary handling and trucking cost that you will never be able to get rid off.

At this point I wish to remind you that operating overhead, particularly fixed operating overhead, consists, not of one great gob of money, but it is, rather, the aggregate total of a lot of little and big cost elements.

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GLYCERINE SUPPLIES

By THOMAS R. FARRELL

THE sharp break of about 15 cents per pound in the glycerine market, bringing the price from about 40 cents to about 25 cents, is typical of price movements in a by-product chemical which must be moved at any price when supplies back up or threaten to back up. Conditions surrounding glycerine have indicated for some time that an over-supply was likely to accumulate and that price reductions would be necessary to overcome the situation. Not the least of the conditions which threatened the glycerine producers was the coming into full production of the Shell Petroleum project for synthesis of some 30 to 35 million pounds of glycerine from petroleum annually.

The Shell plant is believed now to be in full operation adding to the market an additional supply of upwards of 15 per cent of the amount produced last year as a by-product of soap. During the war years and the years immediately following the war this additional production would have been welcomed by everyone and probably would not have affected the price position. However, things have changed materially within recent months.

Demand for glycerine has slumped badly in some very important glycerine-consuming industries, although it has held up in some others. Demand from makers of tobacco products continues at an unbroken high level, and demand from manufacturers of drugs and cosmetics continues high, although this is a relatively small consuming industry. However, demand for glycerine for dynamite production has been off sharply as the use of dynamite for the building of roads and the mining of coal has been sharply curtailed.

Another glycerine use which held great promise is in production of the alkyd resins, used in quick drying paints. An increasing use in this direction dates back to about 1936 when the Kienle patents covering these products were invalidated by the courts and the field was open to all manufacturers. During the war demand for the alkyd resins reached new heights when the Navy insisted upon this type of paint for everything above the water line, and Army made wide use of newly developed non-gloss paints of this type. It was necessary to increase production of phthalic anhydride to make these resins for production of paints which possess marked properties of quick-drying, adhesion, toughness, and flexibility.

While, in the production of these resins, glycerine had competition from penterythritol, various synthetic glycols, and sorbitol, it is estimated that from 20 to 25 per cent of the glycerine production went into this field. Now production of the alkyd is described by both makers of glycerine and phthalic anhydride as at a standstill with most of the producers shut down. Inventories of these quick-drying paints are said to be top-heavy all along the line. This cessation of activity in glycerine consumption at a time when the synthetic glycerine is making its appearance on the market, called for drastic action pricewise. The action taken was to reduce the glycerine price to the levels at which it was believed the synthetic maker was selling his output.

However, the glycerine producers were in a good position to cut prices since the market for fats and oils used in the production of soap has slid from a level of about 16 cents to a level of about 6 or 7 cents. This means much cheaper costs of soap and glycerine. However, as glycerine is strictly a by-production of soap manufacture, its selling price is not based upon costs but rather upon a relationship between supply and demand. There are no indications that the present price is to remain at the quoted levels for any definite period of time. It can be expected to go higher if supplies tighten, or to go lower if supplies continue to accumulate. Glycerine is normally a fluctuating market.

In 1940, when glycerine consumption totaled 152 million pounds, 27.7 million pounds, or 18.3 per cent went into the alkyd resin industry. However this percentage increased to 25 in 1948 when 198 million pounds were produced and upwards of 200 million pounds were consumed. It will be noted that glycerine consumption was higher than production in 1948 causing producers to dip into reserves

and making for a firm market. Glycerine consumption for production of dynamite and explosives normally runs about 20 per cent, tobacco consumption about 16 per cent, rubber processing about 20 to 23 per cent, and drugs and cosmetics about 10 per cent.

A level of 25 cents per pound for glycerine still appears to be a good price from the point of view of the soap makers. Most years the glycerine price has varied in the "teens" from 11 cents to 19 cents a pound. The very high prices for glycerine only came into effect upon the abolition of the wartime price controls following the cessation of hostilities after World War II. However, the producers enjoyed almost three years of these high prices which could hardly be expected to last forever.

Whether or not glycerine prices will sink further or will prove firm at present levels depends upon a number of factors. A main factor in this situation is the extent to which synthetic detergents have cut into the soap business. Since there is no glycerine available in the manufacture of synthetic detergents from either vegetable oils or petroleum, the amount of glycerine available will fall as the percentage of synthetic detergents used rises. From present indications, the synthetic detergents are making heavy inroads for laundry use in areas in which the water is hard, but soap for laundry use seems to be holding its own in the areas where the water is soft. The climb in the use of synthetic detergents was extremely rapid in 1948 when sales reported by Roy W. Peet, manager of the Soap & Glycerine Producers Association, were placed at 120 million pounds for the last quarter of the year, against 69 million pounds for the first quarter of the year. In three soft-water areas, synthetic detergents were found to have only 5.9 per cent of the laundry soap market, while synthetics enjoyed 36.2 per cent of the market in two hard-water cities. In three soft-water cities, laundry bar soaps had 48.8 per cent of the market, while in hard-water areas their share was only 28.4 per cent.

The fact that the synthetic detergents had not scratched the surface of the market before the war means that an entirely new set of conditions now prevails in the soap industry and it will take some time before we shall know what might be considered a normal relationship between the production of soap and the synthetic detergents. It is only in comparatively recent months that soap production has proved plentiful in this country. It is quiet likely that the overall use of soap and other detergents as a group is on a new high level as is the case in most other products as the result of the higher national income and higher earnings of the average individual. This would mean that the percentage of synthetic detergents cannot be taken as an indicationof the curtailmentof glycerine production without considering the total tonnage of soap made from fats over the various years. For despite the inroads which synthetic detergents have been making in recent years, the production of glycerine has been at very high levels indicating that the synthetic detergents had not as yet affected to a noticeable degree the production of soap and its by-product, glycerine.

However, there are very few to expect conditions in this country to remain on a steady plane in all industries, despite Government assurances to the contrary. When general conditions slump off, consumption of soap and production of glycerine will decline.

Soap manufacturers have moved their prices down to what they believe is the price at which the synthetic glycerine is being sold. Thus they have taken a definite step to meet this competition at a time when heavy shipments of the synthetic material are going forward. If this meeting of competition does not move the glycerine that is produced, the soap manufacturers can be expected to quote still lower prices until a level is found at which the supplies of glycerine move into consumers' hands. What steps would be taken by the synthetic maker under such conditions remains to be seen. It is said that the output is contracted for, but lower prices for natural glycerine would make these contracts very vulnerable. It is unfortunate for the synthetic manufacturer that his plant was not in operation at the beginning of the war, for if it had been, it would not be completely amortized and therefore production costs would be much lower. However, now that the plant is built and paid for, it might just as well be operated even if its initial cost has to be largely written off.

SELECTION AND TRAINING OF DETAIL MEN

By ARTHUR PETERSON*

I BELIEVE we are agreed that the trend of business conditions and the national economy are such that it behooves each of us to have a sales staff that can operate at the highest possible efficiency. Manufacturers have given a great deal of attention, in the postwar period, to the upgrading of the quality and efficacy of their advertising. Professionals in the field have come markedly to the fore.

Is it not as important to give as careful and objective attention to the improvement of the quality and efficiency of pharmaceutical sales staffs? It is obvious, judging from reports and admissions, that some have permitted the quality and efficiency of their sales staffs to deteriorate by placing too many unqualified men into the field: men who have no pharmaceutical knowledge, no retail experience by which they may better "know their way around;" men who by comparison are more skirkers than workers; men who are not sales or service minded. A poor or mediocre sales staff can not do justice to good advertising or other marketing forces.

To do their jobs properly, representatives in the field must be clincher men who nail down the specifications; men who can get good cooperation from dealers, and who can get distribution where it really counts. Such men must be professionals in mind, by choice, and by performance, and most likely are men who, at the outset of their career training, determined upon the pharmaceutical field in which to pursue their life's work. Elsewhere I have defined a professional as one who has a mastery of his subject and an absorbing interest in his operating (selling and detailing) proficiency and in the pursuit of scientific knowledge for its own sake.

If representatives are little more than walking and sound-making billboards, that is, billboarders, they will do little or no more than good advertising can do less expensively. Instead of building prestige, they lower the prestige and acceptance of a firm in the eyes of the physician. They depreciate his estimation of detail men as a whole and thus make the entree of all of them more difficult. That then denotes a selection problem.

Selection

The first step in the selection of a sales representative should be a job analysis. What are the requirements of the job? The second step is to determine what educational background and subsequent experience *best* fits the requirements of the job.

So far as the broad educational requirement is concerned, why not let the colleges most suited to the business take care of that phase of the problem? Let the retail drug stores provide the basic selling experience. *You* look after the post-graduate phase as it pertains to your particular business.

We have often heard it said that salesmen are born, not made. And also we have heard the assertion denied. I contend that if a man does not have innate sales ability, no amount of training will make of him a proficient salesman. But, I am not as dogmatic in that assertion as at first it may appear, and for this reason: No man, in my opinion, has an aptitude for only one endeavor unless his make-up is extremely unusual. Each of us has *many* capabilities or aptitudes, and each of these in greater or lesser degree of potential development. Some aptitudes may be very marked, some very weak, some in between. An individual will ordinarily have more than one strong aptitude. Analyze your own aptitudes for a few moments.

Response to instruction or training is most likely to be in some proportion to the intensity of the particular aptitude with which the individual concerns himself. So the trick then in screening an applicant from that point of view is to determine in which direction his strong aptitudes lie.

A representative or detail man in the pharmaceutical business should have two particularly strong aptitudes, one for selling and one for pharmaceutical sciences. But, further than that, he should have suitable basic training in these aptitudes to be a most proficient representative. Than there is still another variable that must be recognized. A man or woman may have a strong aptitude for a calling but have no occupational interest in it, except possibly as a last resort. Again, one may have a relatively strong occupational interest in a particular endeavor but very little aptitude for it. You have seen both kinds.

Having basic scientific preparation and retail experience is in itself no assurance that one can perform the pharmaceutical selling function satisfactorily. It may be an assurance that the man can, if he will, master the technical aspects of your products, provided his memory has been reasonably retentive of what he has previously learned. But does he have the drive, the real ability to sell, the ability to present a product

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so as to lodge conviction with the physician? Can he shut up at the right moment? Will he do a good day's work efficiently? Can he obtain dealer cooperation? Can he gain prestige for his house?

Can he sell? One of the best measures of that is likely to be a man's retail selling record, the success which he has attained in retail selling. That should be carefully investigated. If he has been or is a drug store manager, particularly of a good merchandising drug store, or if he has been the selling spark plug of such a store, it is fairly good assurance that he will qualify from the point of view of selling ability.

Recruiting Salesmen

The next question then is "How are men with the best qualifications to be recruited? A limited number of qualified prospective pharmaceutical salesmen, that is, detail men, will probably visit the sales manager's office in quest of a position: more will come who are not qualified. Probably most prospective pharmaceutical representatives who are qualified do not make contacts or approaches in that manner. Instead they make their desires known to representatives or sales managers who come to the drug stores in which these prospects are employed.

Thus to enable him to build his staff or make replacements with the best kind of material, the sales manager should set aside a certain amount of time for scouting expeditions. When he finds what appears to be a likely candidate he can easily enough arrange for the proper approach by the prospect.

Training

There are now in use essentially four ways of introducing men to training and active service:

Type 1. Give no training at all except for a day or two of showing how to write orders and make out daily reports together with a brief scrutiny of the products listed in the catalog.

Type 2. A new man is assigned to accompany an experienced representative for approximately a week. Then he is sent to a vacant territory where the district manager spends about a week with him before turning him loose on his own. If then, after six months or thereabouts the man has been considered to have made good, he is taken to the home office and laboratories for intensive training.

Type 3. A new man is assigned to accompany one or more experienced representatives for two or three weeks. Thereafter he is brought to the home office and laboratories for intensive training.

Type 4. A new man is brought immediately to the home office and laboratories for intensive training.

In each of types 2, 3, and 4, district managers spend about a week on territory with new representatives after completion of the home office training period and then see them periodically thereafter.

Sending to territory poorly prepared men, such as is done in type 1, and in the 6 months floundering period of type 2 training, undoubtedly is helping to create the unfavorable impression which physicians and operative pharmacists have been increasingly harboring toward detail men in general in the postwar period.

There are many well qualified men in the field today and many who are being put into the field, but one well known pharmacist expressed himself in this fashion, "Pharmaceutical houses are putting on far too many unqualified men as representatives. These men are a detriment to the houses they represent, they don't know the business, they don't know their stuff, they are a nuisance to both pharmacist and physician, and they lower the prestige of their houses."

That about sums up the impressions of the pharmacists and physicians who have expressed their opinions to me. I am merely reporting them to you. The training procedures described in types 3 and 4 of training procedures are by far the better, in my opinion, with type 3 probably the best of these three methods 2, 3 and 4.

Training Class

Merely a few words about the training class itself. We need not be concerned, I believe, about doing too thoroughly the training on products information and on selling procedures. The question should rather be whether the training is thorough enough.

Whether the course continues for four weeks or six weeks or more is of little consequence compared to an assurance that new representatives are well-grounded in and have an intelligent understanding of the chemistry, body anatomy, physiology, pharmacology or any other branches of the pharmaceutical or medical sciences with which the products are concerned.

One thing I should like to stress is that representa-

(Continued on page 507)

ANTON VAN LEEUWENHOEK, AS LONG AGO AS 1692, ILLUSTRATED THE FACT THAT IT WAS KNOWN TO HIM THAT ACID INHIBITED BACTERIAL GROWTH BY THE FOLLOWING QUOTATION: "I HAVE DIVERS TIMES PUT A LITTLE VINEGAR INTO A LITTLE PEPPER-WATER AND HAVE ALWAYS SEEN THAT AS SOON AS THE PEPPER-WATER WAS MIXED WITH THE VINEGAR, THE ANIMALCULES THAT WERE IN THE PEPPER-WATER DIED INSTANTLY."

BETTMANN ARCHIVE

PRESERVATION OF PHARMACEUTICALS

By F. J. BANDELIN*

THE problem of the preservation of pharmaceuticals is immense and complex. Its complexity is compounded because every formula and every variation of each formula presents its own problem contingent upon a number of factors. Among the most important of these are:

1. The pharmaceutical form—liquid, powder, ointment, emulsion.
2. Amount of nutrient present to support microbiological life and growth—carbohydrate, protein.
3. Acidity or alkalinity of the product.
4. Presence of compounds which are inherently bacteriostatic or fungistatic.
5. Organism (s) involved.

Since the field is so large and ambiguous, it is difficult, if not impossible, to cover it adequately. For the purpose of brevity and because of the apparent limitation of the preservative compounds, this paper is to preservation of pharmaceutical liquids for internal use by oral administration. Gershenfeld and Perlstein[1] have listed the characteristics of an ideal preservative. They are:

1. Effective against all types of micro-organisms causing decomposition.

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2. Soluble in the concentration used.
3. Not toxic where used and in concentration employed.
4. Compatible; must not alter the character of the preparation as far as objectionable odor, taste, etc., and must be practically neutral so that it will not alter the pH of the preparation.
5. Cost should not increase the price of the preparation to any marked extent.
6. The developed inhibiting effect must be lasting and therefore it may not be possible to depend on volatile substances, the effects of which disappear after evaporation.

Pharmaceutical preparations in use before alcohol as such was widely known or used, depended upon a high sugar content for stability and were generally prepared in thick solutions containing honey as a base. These were known as electuaries or treacles. Other preparations depended upon a high salt content for preservation. This was not unlike the well known process of pickling in which soaking the item in salt brine prevents spoilage. With the discovery of the art of distillation by the Arabs in the 9th Century and the subsequent availability of alcohol of sufficient concentration to keep in air, this solvent and preservative became of singular importance to the art of the pharmacist. It has a dual advantage in being not only a means of preservation, but also an excellent solvent for the extraction of active medicinal principles from roots, herbs, etc. Many early formulas were developed using both sugar, usually in the form of honey, and alcohol. These were called cordials or elixirs. In many instances, wine was used as the extracting menstruum but even here, sugar and additional alcohol were often added as further preservatives.

About the 17th Century it became a practice to extract drug material with strong alcohol or brandy and to prepare from the product a tincture. Often this tincture was concentrated further through evaporation to give a fluid or solid extract. Largely by trial and error, through the centuries, the pharmacist learned that certain combinations of drug, sugar and alcohol would keep without fermentation or mold growth. Early preparations and wines were often protected by overlaying with a thin layer of olive oil to shut out the air and prevent vinegar formation and mold growth. The invention of the cylindrical glass bottle in the late 17th Century and the later introduction of the cork stopper made it possible to keep preparations free from fermentation and mold growth to an extent unknown before this time.

An important yet largely ignored factor in the preservation of liquids is the pH of the preparation. In liquids having a pH of less than 3.0 or more than 10.0 the hydrogen and hydroxyl ions have a distinct inhibitory action against molds and bacteria. Growth which might take place at these extreme ranges progresses very slowly. The fact that acid inhibited bacterial growth has been known almost as long as the presence of bacteria have been definitely known may be well illustrated by the following quotation from van Leeuwenhoek in 1692:[2] "I have divers times put a little vinegar into a little pepper-water and have always seen that as soon as the pepper-water was mixed with the vinegar, the animalcules that were in the pepper-water died instantly." The effect of acidity or alkalinity, of any magnitude, upon the efficiency of preservative compounds should always be considered.

In returning to the consideration of alcohol as a preservative, it may be pointed out that the pharmaceutical literature contains a very meager amount of unorganized and widely scattered information concerning the concentration of alcohol required to preserve medicinal preparations. Undoubtedly an enormous amount of investigation has been carried on by manufacturers on this subject but little, if any, is ever published since it is usually regarded as a trade secret.

A study of the liquid pharmaceutical specialty preparations on the market and the alcohol containing preparations in the official and semi-official compendia indicates that a minimum concentration of about 15 per cent alcohol is apparently required for preservation. Although there are many preparations with a much lower alcohol content, these usually have a high sugar or solids content. The industry has generally regarded 15 per cent alcohol adequate for the preservation of slightly acid preparations having a pH of 5.0 or lower, while neutral or slightly alkaline preparations require 17 to 18 per cent alcohol.

There are a few outstanding papers on the investigation of alcohol as a preservative. The work of Gabel[3] entitled "The Relative Action of Preservatives in Pharmaceutical Preparations" confirms the generally accepted axiom that 15 to 17.5 per cent alcohol is required. Gabel found that acid solutions required 15 per cent alcohol while neutral or alkaline solutions required 17.5 per cent alcohol.

In a study by Perry and Beal[4] it was revealed that in capped tubes, an alcohol concentration of 8 to 11 per cent inhibited the organisms under investigation and that 14 to 15 per cent concentration was required to kill them. In open tubes results were not uniform and a higher concentration of from 17 to 20 per cent was required to kill the organisms.

Grote and Walker[5] in an excellent review of this field, listed a number of pharmaceutical liquids found in the various official and semi-official compendia and noted their alcohol content, the free water content, their total alcohol content and the alcohol concentration based on the free water content. They commented upon the additive effect of sugar and glycerine as well as the solids present which reduced the free water content and so correspondingly reduced the alcohol required for preservation.

In the formulation of products containing alcohol as a preservative, it is an economic necessity to consider the additive preservative effect of the contributing

(Continued on page 508)

COSMETICS Functions and Formulations

Manicure Preparations Part II

Lacquer Removers

By HARRY HILFER

ANY of the usual solvents for nitrocellulose may be utilized as lacquer removers. Acetone is perhaps the quickest acting solvent since the rate of solution with it is greater than with the higher molecular weight solvents which may be used. However, its low boiling point and its low flash point are deficiencies which have caused most manufacturers to use higher boiling point materials, despite their relatively higher cost. These solvents include Ethyl Acetate, Butyl Acetate and Methyl Ethyl Ketone. They may be used by themselves or in conjunction with each other for specific effects.

In many cases thickeners are added to overcome the unduly low viscosities of the solvents themselves. Increasing the viscosity in this manner makes the removers more easily adaptable to their function. Among other thickening agents, ethyl cellulose and nitrocellulose are the most commonly used.

In best practice, a mixture of solvents containing essentially Butyl Acetate and Ethyl Acetate is used as a remover. In the vaporizing range represented by this mixture, the woman will easily have enough time to apply and then remove before the remover film evaporates completely.

WIDE WORLD

There have been some attempts made to formulate lacquer removers as creams or in gel forms. So far none of these new forms, as far as the author can see, has made much of an impression on the market, and unless such a form could be made without the use of the normally used emulsifying and gelling agents, which certainly interfere with the efficacy of the solvent, there is a great element of doubt as to whether they ever will. If an emulsion is made with water (which could be done by using a proper emulsifier) as in common emulsion practice, the water would interfere with the solvent properties of the esters, even if it (the water) is in the dispersed phase. If gelation by means of a soap is resorted to, the residue remaining on the nail's surface usually leaves a white soap film on evaporation.

Cuticle Removers and Softeners

For the past fifty years alkali has been the chief agency used as cuticle removers and softeners. Caustic soda in a one to three per cent concentration has perhaps been the most commonly used material though tri sodium phosphate and sodium carbonate enjoy a fair popularity as well. The weaker alkalis such as triethanolamine though less irritating do not perform this function as well as do the stronger ones. Their efficiency depends on their ability to react with the chitinous cuticle and to destroy or partially destroy it. Under any circumstances it softens the chitinous tissue to such an extent that the remnants may be easily removed with the usual manicuring implements.

The universal objection to these types of products lay in their irritation potential due to their high pH. More recently certain quaternary ammonium compounds have appeared which effectively soften the cuticle at a neutral pH, though they do not have any tendency towards its complete destruction. These compounds are being investigated so that their efficacy as cuticle removers may be ascertained. If they are as capable of this function as their manufacturers claim,

they should largely replace the more common high pH media now used. The quaternary ammonium compounds would also possess the added qualification of being antiseptic so that danger of infection due to cuts in manicuring would be minimized.

The cuticle softener preparations are also of rather low viscosity unless thickening agents are used in conjunction with them. Methyl cellulose and sodium carboxyl methyl cellulose are several of the thickeners used in conjunction with alkaline media. These substances however may not be adaptable for use with quaternary ammonium salts because of possible incompatibility. This does not necessarily apply to all quaternaries, however, and their use should be checked with whichever agent is chosen.

Base Coatings

Lacquer manufacturers have advertised the use of base coatings in conjunction with lacquers as a method of prolonging the life of the lacquer, because the base coating would be better adhered to by the lacquer than to the nail surface. These coatings used to be solutions consisting almost entirely of nitrocellulose and solvent with little plasticizer and gum resins. With the introduction of the many new compounds usable for such purposes, particularly the alkyd resins, there has been a tendency towards experimental work with the new compounds, because many of them have better adhering properties than do the older forms. A woman expects the lacquer to adhere for a minimum of ten days and possibly longer. It would be an error, however, to think automatically that the longer the lacquer will, or other agency which may cause it to adhere, the better is the product.

The nail is a living thing. It keeps growing all the time. If the lacquer were to adhere in spite of the tension caused by the continuous expansion of the surface of the nail, something would have to give and it would not cause any jubilation if it were the nail. A base coat should be formulated with these facts in mind. Too strong an adhering agency could be equally as undesirable as too weak an agency. The optimum is rather difficult to find or define. What is wanted is a surface that would withstand strenuous treatment with soap and other detergents, be capable of withstanding ordinary abrasive shocks such as the finger tips would normally suffer during the day, be immune to the normal strains caused by contact with sharp surfaces and at the same time to not interfere with a continuously expanding base, which would be the growing nail.

Ideally the super-nail lacquer of the future will probably be made of materials which would form an elastic film which would be capable of expansion with the growing nail and at the same time have as hard a surface as does the film derived from the modern lacquer.

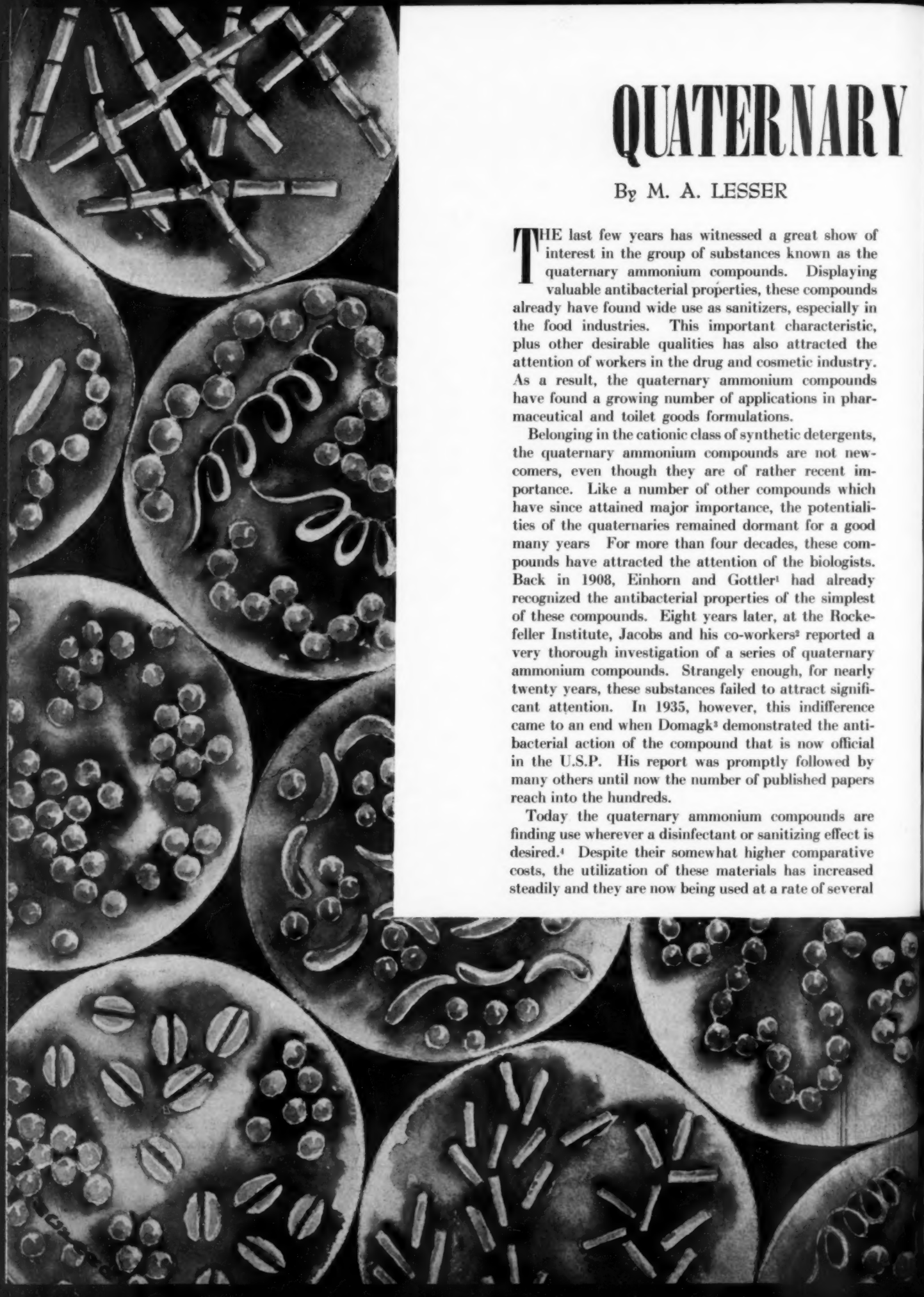
The alkyd resins are relatively new compounds, but with the number of combinations possible in their synthesis, it is not beyond the realms of possibility that a substance with the properties desired would become available. The search for it would necessarily be a tedious one since it would have to conform to all the variables introduced by people not following a single pattern.

Other Manicure Preparations

There are other preparations intended for manicuring which are of lesser importance than those discussed above. Some of them such as the buffers are becoming rather obsolete. They did possess some commercial importance, however, before the almost universal acceptance of nail lacquers and their description will, therefore, be briefly noted. The buffers were mild abrasives which were used to polish the nail surface and therefore increase their luster. Tin oxide was the most generally used abrasive agent used, and it was usually diluted with talc. When used with a buff it had a good luster intensifying function.

Nail whiteners, which were and still are used to intensify the whiteness of the nail ends, were principally ointments consisting of zinc oxide or titanium oxide. The ointment was applied under the ends of the nails and the excess removed.

The nail preparations are an important source of revenue to many cosmetic manufacturers and the popularity seems to be as great as ever. It is also rather a dynamic industry subject to changes in fashion trends and other unseen variables. Here again, however, the successful product must be convenient in its use and perform its function over a convenient period of time. As far as the modern lacquer is concerned, if one could be designed that would be foolproof in its application, which it now is not, a greater number of sales would result. I am reminded of an advertising man who thought the ideal preparation would be one preferentially substantive to the nail rather than the skin so that application could be made by merely dipping the fingers into a bowl containing the lacquer. This idea is, of course, rather far fetched, but it appeals to me as the acme of ease of application and an impossible goal towards which to work. However, somewhere in between there might be a more conveniently applied medium.



QUATERNARY

By M. A. LESSER

THE last few years has witnessed a great show of interest in the group of substances known as the quaternary ammonium compounds. Displaying valuable antibacterial properties, these compounds already have found wide use as sanitizers, especially in the food industries. This important characteristic, plus other desirable qualities has also attracted the attention of workers in the drug and cosmetic industry. As a result, the quaternary ammonium compounds have found a growing number of applications in pharmaceutical and toilet goods formulations.

Belonging in the cationic class of synthetic detergents, the quaternary ammonium compounds are not newcomers, even though they are of rather recent importance. Like a number of other compounds which have since attained major importance, the potentialities of the quaternaries remained dormant for a good many years For more than four decades, these compounds have attracted the attention of the biologists. Back in 1908, Einhorn and Gottler[1] had already recognized the antibacterial properties of the simplest of these compounds. Eight years later, at the Rockefeller Institute, Jacobs and his co-workers[2] reported a very thorough investigation of a series of quaternary ammonium compounds. Strangely enough, for nearly twenty years, these substances failed to attract significant attention. In 1935, however, this indifference came to an end when Domagk[3] demonstrated the antibacterial action of the compound that is now official in the U.S.P. His report was promptly followed by many others until now the number of published papers reach into the hundreds.

Today the quaternary ammonium compounds are finding use wherever a disinfectant or sanitizing effect is desired.[4] Despite their somewhat higher comparative costs, the utilization of these materials has increased steadily and they are now being used at a rate of several

AMMONIUM COMPOUNDS

PART I

million pounds per year.[5] As explained by Varley,[6] it is contended that the higher cost of the quaternaries is more than offset by the many ways in which the materials can be used, by the fact that they are odorless, non-toxic and non-corrosive, and their effectiveness even on high dilutions with water.

Many of the quaternary ammonium compounds are fairly active detergents. Hence it has been suggested that these compounds could act simultaneously as detergents and bactericides. Conceding the possibility that such a product may be developed and sold at a reasonable price, McCulloch and his associates[7] state that none of the materials which they have tested have been sufficiently active and low in cost to justify their consideration as detergents. In addition, there appears to be a tendency for the more actively bactericidal compounds to be poor detergents and the better detergents to be feebly antibacterial. Pertinent in this connection is the observation[5] that even though the more effective quaternary germicides have poor detergent effects they display relatively good wetting action.

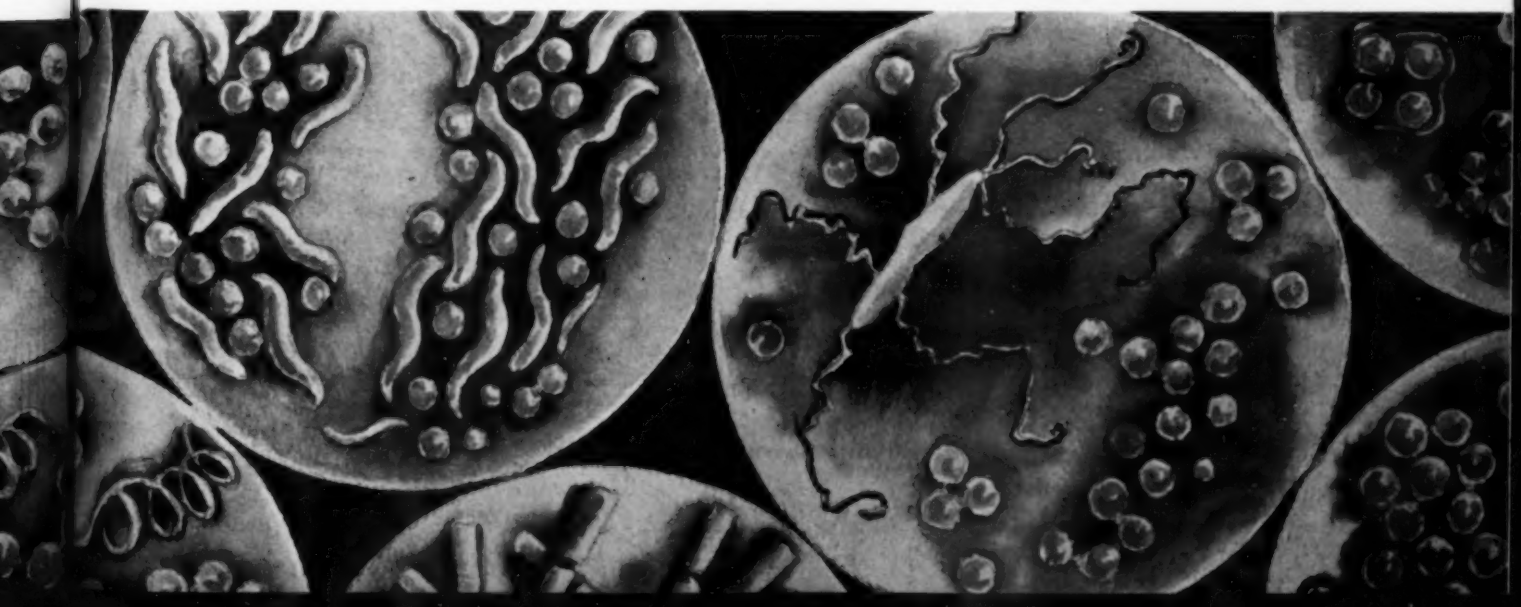
In addition to the characteristics already noted, the quaternaries, as a group, possess other desirable attributes. As a rule they are colorless compounds, but at any rate they show no color in the dilutions generally employed. They are usually described as odorless. Although they are intensely bitter in concentrated form, the practical-use solutions have but little taste.[7] In contrast to many common antibacterial solutions which deteriorate with age or lose their potency when subjected to repeated temperature changes, solutions of the quaternary ammonium compounds remain stable over long periods of storage, are non-volatile, and are unaffected by boiling or autoclaving. The point is often made that these compounds contain no phenol, iodine, mercury or other heavy metals, or hypochlorites.[5]

Quaternary ammonium compounds are manufactured by a relatively small number of companies. As a rule, they sell direct to producers of consumer items. On occasion, however, basic quaternary ammonium salt manufacturers prepare and package their products for direct consumer use through distributors. Others sell their products both ways.[8] The materials are supplied by manufacturers in both powder and liquid form. The powders generally consist of 100 per cent active ingredients. The liquid forms are offered in concentrations ranging from as low as 10 per cent up to about 90 per cent.

The powdered products can be shipped in any kind of moisture-proof containers. However, because of their very pronounced wetting action, the liquid concentrates cannot be packed in ordinary steel, iron or tin containers since rapid rusting takes place. Most manufacturers have reconciled themselves to use of either large class carboys for bulk shipment or in smaller glass containers for consumer use.[6]

It must be stressed at this point that, in the concentrations recommended for end uses, the quaternary ammonium compounds are classed as being non-corrosive to equipment. Rather thorough tests have been made in order to determine the effects of various quaternary ammonium compounds on metals, particularly those used in food processing industries. Practically no corrosive effects were shown by test metal strips placed in contact with two typical compounds for 21 days. In the minor exceptions that were seen, the rusting and pitted spots were due to breaks in the protective tin coating on some of the metals.[9] However, when metal instruments or appliances are to be stored in dilute disinfectant quaternary solutions for a prolonged period, it is generally advisable to add 0.5 to 1.0 per cent of sodium nitrite to minimize corrosion.

According to one definition, a quaternary am-



monium compound is one in which four of the valances of the ammonium nitrogen are saturated with organic radicals. Put another way, a quaternary ammonium salt may be described as the organic counterpart of an ammonium salt. For example, if ammonium chloride (NH_4Cl) were to have all of its hydrogen atoms replaced with organic groups it would become a quaternary ammonium salt.

In a simple compound of this class, the radicals may all be the same, but when more complex radicals are introduced, new and interesting properties (like surface action and antibacterial effects) are conferred to the compounds.[10] Obviously, as by the use of mixed radicals, a large number of compounds are possible. To this may be added an additional number that may be formed by the employment of various anions to yield a chloride, a bromide, an iodide, a sulfate, a salicylate and others. More than a thousand compounds have already been produced.[7] A check of the patent literature[11-15] shows that the number is constantly increasing. However, as pointed out by Zussman,[16] the commercial types of quaternary are relatively few in number. This group includes crystalline and amorphous products, waxy solids and viscous oils. In varying degrees, these are all soluble in water and also in a remarkably wide range of organic solvents.

The chemical reactions involved in making these materials varies, of course, with the complexity of the compounds. A typical example is cited by Lawrence[5] in discussing the quaternary ammonium compound described by Dorragk. This is made by the reaction of the long chain alcohols obtained from the fatty acids of coconut oil with hydrochloric acid, then by treatment with dimethylamine, and, finally by a reaction with benzyl chloride. The resulting products are alkyl dimethyl benzyl ammonium chlorides.

It is interesting that the same compounds have become official in the U.S.P. XIII under the name Benzalkonium Chloride. This is described as a mixture of alkyl dimethyl benzyl ammonium chlorides of the general formula $C_6H_5CH_2N(CH_3)_2RCl$, in which R represents a mixture of the alkyls from C_8H_{17} to $C_{18}H_{37}$. It is available as a white or yellow white amorphous powder, or in the form of gelatinous pieces. It has an aromatic odor and a very bitter taste. Its solution is slightly alkaline and the liquid foams when shaken. The compound is very soluble in water, in alcohol and in acetone, slightly soluble in benzene, and almost insoluble in ether.

At present, benzalkonium chloride is available only under the trade name, Zephiran Chloride.[17] Its manufacture is covered by U. S. patents. However, there are a number of other products, of a technical rather than a pharmaceutical grade, which consist of alkyl (C_8-C_{18}) dimethyl benzyl ammonium chloride. These include such trade-marked products as Roccol, BTC, Rodalon, and Germ-i-tol.[8]

In addition there is a number of other kinds of quaternary ammonium compounds which find important uses in drug and cosmetic products. Among these are Phemerol and Hyamine 1622 which are chemically identical (e.g. di-isobutyl phenoxy ethoxy dimethyl benzyl ammonium chloride, monohydrate). Hyamine 10-X is practically identical with these compounds with respect to physical and bacteriological properties, but differs slightly in chemical composition in that it contains a cresoxy rather than a phenoxy group. The crystalline Hyamines are readily formulated into solutions, powders, tablets, proprietary ointments and pastes, dentifrices, lotions and deodorants.

Ceepryn, used in solutions and tinctures, as well as in special preparations, is described as the monohydrate of the quaternary salt of pyridine and cetyl chloride (cetyl pyridinium chloride). Like Phemerol, Ceepryn is listed in "New and Nonofficial Remedies" of the A. M. A.[18] Cetavlon, also available commercially as Cetab (cetyl trimethyl ammonium bromide), has been subjected to considerable laboratory and clinical study.[17]

More important as raw materials for disinfectants and sanitizers, but sometimes finding employment in the pharmaceutical and cosmetic fields are various other quaternary ammonium compounds. Representative commercial products include: Emulsept (N(higher acyl esters of colamino formyl-methyl) pyridinium chloride), Alrosept MB (alkyl benzyl hydroxy ethyl imidazolinium chloride) and the group known as Arquads. In addition, there is well over a dozen other compounds that may offer advantages in certain formulations.

The available data indicate that the quaternary ammonium compounds, as a group and in the recommended concentrations, are comparatively non-toxic and non-irritating. It must be stressed, however, that the toxicity of even closely related compounds may vary greatly. Hence each material must be evaluated individually.[7]

Solutions of benzalkonium chloride are reported[18] to be emollient and relatively non-irritating in effective concentration. Under the conditions of use for which they are recommended, the solutions are of comparatively low toxicity. Upon administration of a 1 per cent aqueous solution, rabbits tolerate from 3 to 5 cc. by mouth or 1.2 cc. subcutaneously or intraperitoneally per kilogram of body weight. Skin tests on these animals show that a 0.1 per cent solution is the highest concentration that may be allowed to remain in contact for 24 hours without producing irritation. Of interest in this connection is Walter's[19] demonstration of the non-irritating effect of benzalkonium chloride on mucous membranes. No irritation was observed after applying sponges saturated in a 10 per cent solution and leaving them in the vagina of five patients following routine dilatation and curettage of the uterus.

Because of their expanding role in dentifrices, mouth washes and similar preparations, the oral toxicity of the quaternary ammonium compounds, assumes great importance. Especially significant, therefore, are the recent studies made by Shelanski[20] on four repre-

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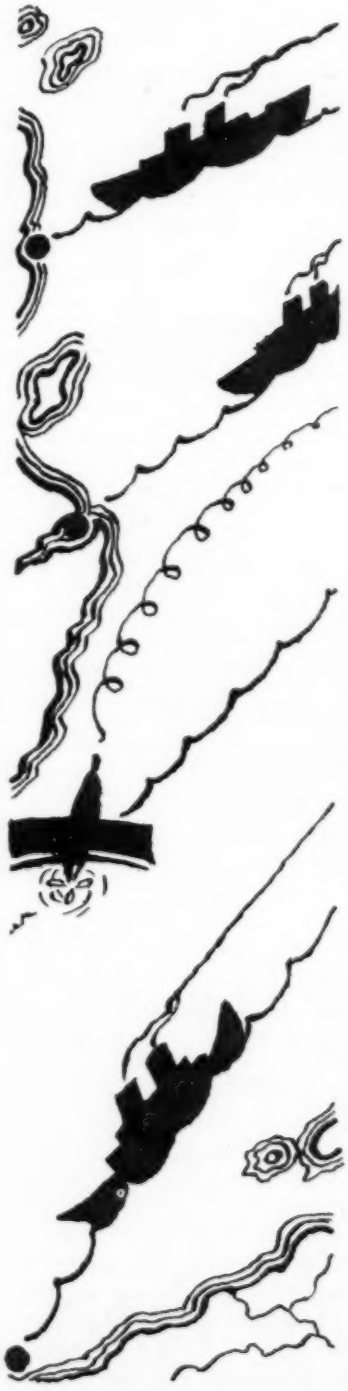
DRUG EXPORTS IN 1948



By THOMAS W. DELAHANTY*

IN 1948 the drug manufacturers of this country exported what would have been equivalent to half its entire production a decade before. These exports, totaling $191 million, were 8 per cent above 1947 exports. Every year since 1938 has established a new export peak, with 1948 exports being eleven times larger than that prewar base year. Also the increase of $14.25 million of drug exports in 1948 over 1947 was against the general trend as total exports in 1948 were 17½ per cent below those of 1947. Foreign demand for U. S. drug preparations in 1948 was one-third, or $46.33 million greater than 1946 drug exports.

However, when the commodity groups are examined, some disturbing elements appear. Antibiotics, primarily penicillin and streptomycin, accounted for three-eights—almost $71.5 million worth—of drug exports, more than double 1947 and almost triple 1946. Had it not been for the seemingly insatiable demand and spectacular overseas movement of these therapeutic aids, 1948 drug exports would have been no greater than in 1946. Compared with 1947, druggists nonproprietary preparations were 17 per cent less, and medicinal chemicals for prescription use 18 per cent less, both groups analogous to the decline in total exports, whereas the proprietary remedies group was 27 per cent less.

Only vitamins remained relatively constant in each of the three years, exports totaling $27.4 million in 1948. As world conditions improve and wider cultivation of markets ensues, it is conceivable that vitamin exports might be double this amount.

The decline in the druggist preparations group to $39.33 million could be attributed more particularly to the surprisingly lower sulfa drug exports of $10.33 million sales which were at their peak in 1946. Conversely, while exports of biologicals in 1948, almost $16.5 million, declined one-eighth, the trend has been progressively forward and should continue so. Galenical exports of $12.5 million were decidedly less than 1947 but almost equal to 1946, and the outlook is promising.

Proprietaries, down in 1948 from 1947, were also down from 1946 figures. In the $23.5 exports for 1948, the principal item to decline was tonics, which at $2.4 million were less than half 1947 exports. Such leaders as medicinal plasters, $2.1 million, laxatives, and milk of magnesia, $3.75 million, were one-third below, and salves and ointments, $2.67 million, were only three-fourths and bronchial preparations, $2 million, were but four-fifths of 1947 sales. The unique progressive items were digestive preparations, $1.8 million, which were 47 per cent and 30 per cent above 1946 and 1947 respectively, as well as headache remedies, $1.37 million, and asthma preparations, $1.25 million, which virtually maintained their overseas positions. Exports of all other remedy classes were in the vicinity of one-third less than 1947. The overseas outlook does not appear reassuring at present for proprietary medicinals in general, because of the nationalistic barriers in a number of countries.

It was indicated that the United States drug exporter may be too selective in marketing inasmuch as in 1947 and 1948, eight countries collectively took over half the drug exports, three each in North America and South America, and two in the Far East.

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(*Continued on page 506*)

Check with Continental

- ✓ Check the dependability of supply that Continental assures users of cans.
- ✓ Check the quality of Continental's lithographed designs.
- ✓ Check Continental's service — service that has made customers of outstanding manufacturers in this field.
- ✓ Check Continental's record on research and product development.
- ✓ "Check with Continental" before making any decision affecting your supply of cans. It costs nothing, may mean much!

CHECK-LIST FOR DRUG, PROPRIETARY AND CHEMICAL MANUFACTURERS!

Continental makes a wide and complete assortment of cans for everything from pills to powders. If your packaging problem is one of size, shape, type of closure, special protection or merchandising appeal, chances are we have just the container you need.

You can't beat Continental as a dependable source of supply

CONTINENTAL CAN COMPANY

100 EAST 42nd STREET, NEW YORK 17, N. Y.

PACKAGING and SELLING

DISPLAY'S THE THING

It is curiously interesting to observe the number of retail organizations which are making detailed and factual tests on the value of display, particularly counter display.

While it may well be that retailers in general are facing the buyer's market with renewed vigor and are intelligently experimenting with methods for increased sales, still the frequency with which these tests seem to bob up suggest the idea that retailers may have a secondary purpose in these wide-spread factual studies.

There isn't any doubt that the retailers are discovering something new in the oldest principle of merchandising, that is display.

For instance, in recent super-market tests, two leading soap brands were displayed, first at waist level and then on the bottom shelf. When moved to the bottom shelf, one soap brand lost 49 per cent of sales, the other 47 per cent. Some time ago a variety store chain found that it could increase or decrease sales of merchandise around an average of 30 per cent, simply by shifting it to various positions on the retail counter.

Just recently one of the well-known drug chains made an experiment in which they took 20 stores and divided these stores into five groups of four stores each, so that each group would be relatively alike in volume and other characteristics. This store then took the five leading brands of shaving cream and by alternating the display position of these brands from preferred display to no display, through these store groups, proved conclusively that the sale of any one of these brands of shaving cream was in direct relation to the amount of display provided by the store.

The detail with which these tests have been made, the similarity of the experiments, would almost seem to suggest that there is a feeling running through the retail trade that a retailer should not only have factual evidence for his own guidance on the influence of display over sales, but in addition, that it might also prove exceedingly valuable for a retailer to know just where he stands and just what his power is in negotiations with the manufacturer.

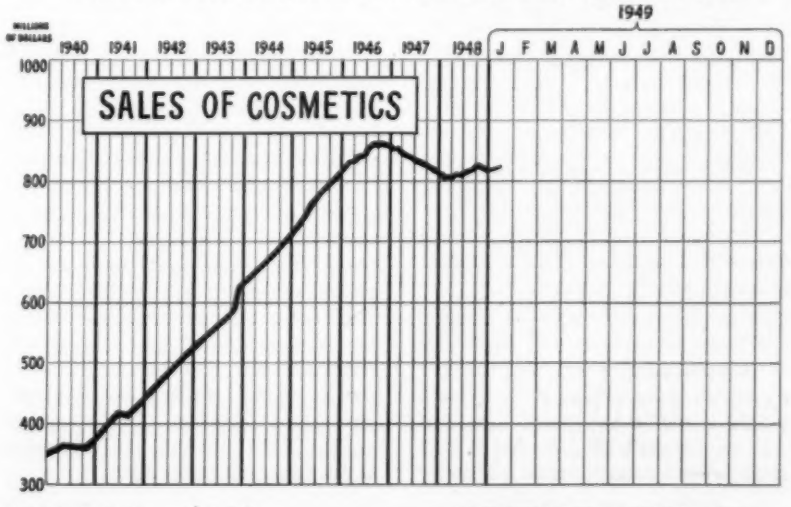
It would be interesting to speculate as to the exact number of percentage of retailers who have been sufficiently competent and sufficiently aware of their own power to meet manufacturers, and particularly the manufacturers of heavily advertised utilities, on equal terms. It is possible that the number of these retailers might be reduced to a relatively small number of the big chain operators. Even here, we might read between the lines in the report of some of these experiments from super-markets, variety and chain stores, that the biggest retailers, while they have been well aware of their power, have not quite completely realized the full force of control which they can exert over the sales of the best-known, most heavily advertised brands.

What is the margin of control which a competent retailer holds over sales? The retailer holds two broad, basic opportunities for selling. The first of these is the customer who enters his store to buy a specific product, such as shaving cream, aspirin, soap or perfume. A few of these customers are committed in their own minds, through habit or some other reason, to a specific brand. But these tests on display certainly prove that it is the rare individual who will accept only one brand in any classification of goods. These customers may resist and object to a brand which they have never heard of or a brand which has previously proved unsatisfactory to them. But in almost every class of goods, there are two or three or more brands that all fall within the field of acceptance.

There has been quite a bit of talk lately about "brand disloyalty." Actually what this means is that even the most potent advertising on even the simplist or lowest priced utility has failed to make a complete robot out of the American buyer. There seems to be instead a willingness to accept a relatively limited number of brands with which the buyer has become acquainted through advertising or in some other way, and beyond that barrier a wide field inhabited by many unknown brands to which the buyer has a subconscious or conscious resistance.

Nevertheless, from the retailer's viewpoint, in practically every commodity he has available to him a fairly wide selection of brands, each acceptable in varying degrees, which he can pit one against the other for favored treatment.

Retail sales of cosmetics for the twelve months ended with January 1949 amounted to $822,133,000. This compares with $816,060,000 for the twelve months ended with December 1948 and with $802,704,000 for the twelve months ended with January 1948.



The rather remarkable thing about these surveys, which must prove as increasingly startling to manufacturers as they are to retailers, is the high degree of frequency with which a consumer will accept what might be called a secondary, well-known brand in preference to a primary well-known brand, if the secondary brand is made visible and easily accessible and the primary brand is subordinated in visibility and accessibility. It seems very possible that brand disloyalty can bite very much deeper into brand sales than anyone has so far expected, if it is put to the brutal test of retail disfavor.

The second margin of control which a dealer exercises is in the type of purchase which has usually been called the impulse purchase, but which is recently going under the much more revealing name of the unplanned purchase. This unplanned purchase, according to recent tests, holds the promise of startling sales variations, all within the complete control of the retail executive. For instance, a leading national advertising agency, in a very competent panel study of consumer shopping habits in drug stores, found that 48 per cent of the women who entered these stores during a given period made an unplanned purchase. Also recently a leading package material manufacturer found that 54 per cent of women shoppers in grocery stores made an unplanned purchase.

The unplanned or the impulse purchase is almost wholly dependent upon retail display and intelligent retail clerk selling. The retailer not only has kept control of display but can exert a substantial control of behind-the-counter selling. The unplanned purchase can be the predominant factor in determining the sales volume of all products which fall within a gift classification. It may be the determining factor in products which are not low priced, habit utilities, or staples, or even in the case of this latter group, it can determine a substantial plus or minus percentage of sales volume.

A close analysis of all these surveys, plus a better understanding of what actually takes place at the retail counter, could easily lead to the conclusion that competent retailers can exert an influence that will govern for good or bad an average of 30 per cent of the volume of the goods in his store. Obviously, on many kinds of products this influence will substantially exceed the 30 per cent volume. On a limited number of well-established staple products, this percentage may possibly fall below this figure.

But we must conclude that no matter what the product is, and irrespective of its consumer acceptance, the retailer holds certainly very definite strategic advantages in influencing its sales, and that there seems to be fairly clear evidence that the more alert retailers are becoming more specifically conscious of this power which rests within their control than they have ever been in the past.

Up to this time, so far as we have seen, these tests have been entirely concerned with the influence and effect of display. There have been no tests which indicate the parallel influence which may be attributed to the retail sales clerk. But neither retailer nor manufacturer needs any similar factual evidence to inform him that the favor and informed knowledge of the sales clerk can be a dominating factor in controlling retail sales.

A high percentage of the so-called bad practices that had accumulated in relations between manufacturers and retailers before the war, and which are galloping back into full position at this time, were concerned with preferential favor of the retail sales person.

The prevalence and the abuse of the P.N. is in itself convincing evidence of the way in which the retail sales person can juggle and discriminate against or favor retail products. Even more convincing, if this were needed, is the thorough control of certain retail sales channels which the system of manufacturers' paid demonstrators has has established in certain classes of retail stores.

In many of these stores, and predominantly in the department store, the cosmetic products which are normally classified as demand items, and which are backed by advertising appropriations running to a million dollars a year or more, are nearly excluded from sales in this type of store, whereas the products of many demonstration systems, backed by comparatively meager advertising appropriations, and in some cases with relatively moderate consumer reputation, run into very considerable sales figures.

It would be very easy to select a prominent retail store and show that the annual sale of several of the heaviest advertised, demand lines will not exceed $1,000 a year for any one of these lines and, on the other hand, to find in that store several cosmetic lines with very modest advertising appropriations and with very limited community brand recognition, and yet with sales running from $10,000 to $40,000 a year.

Is it possible that we are emerging from a period between the two world wars when the growth and the momentum of consumer advertising and consumer advertising demand largely blinded nearly all of the retail trade to the fact that under the direction of a thoroughly competent merchant, the sale of any kind of merchandise within his store is very largely under his control if he will properly use the instruments at hand.

Is there any significance in the way in which retailers are so generally picking up this ball of retail sales investigation and exploring it within their own stores for factual evidence that they really do own their own business, irrespective of any amount of weight that can be brought against them through consumer advertising. It would seem at the very least that we are at the first beginning of a period which will eventually resolve into a new kind of balance between the manufacturer of packaged, branded merchandise and his retail customer.

Color Booklet

The influence of color on sales, particularly when it is used expertly in packaging and advertising, is far from a new idea in merchandising. Color can also be a negative force in selling, and there are records of some experiences where the company using color would have been far better off if they had stayed with black and white. We remember, for instance, an historical example some years ago where a candy manufacturer found that a certain shade of green actually repelled and discouraged sales.

The Hinde & Dauch Paper Company have just issued a little book with the title, "How To Use Color On Corrugated Boxes." This booklet is No. 4 in a series of very intelligent booklets in the use of shipping containers called, "Little Packaging Library."

Some of the interesting things commented on in this booklet is the association of ideas with color, that is red is a vigorous color, the blood color, the color of warfare and heat. Yellow is the color of deceit and cunning and for intellectual pursuits. Green is nature's color, primitive, sympathetic, productive. Blue is a color that quiets emotion, the tranquill color. Purple is the regal, exclusive color.

For legibility color combinations have ranked in the following order:

(1) Black on yellow (2) Green on white (3) Red on white (4) Blue on white (5) White on blue (6) Black on white (7) Yellow on black (8) White on red (9) White on green (10) White on black (11) Red on yellow (12) Green on red (13) Red on green (14) Blue on red

With these combinations, the message on the package can either speak with a blatant punch, with dignity or with softness. Even here a great deal of skill in selection is needed because experience has shown that many of these color combinations may not be suitable for the product, even though they accomplish best some primary requirements such as long distance visibility.

This booklet lists the fundamental functions for color for packages. These are:

(1) Does the color of your package attract attention?

(2) Does it attract interest?

(3) Does it instill desire?

(4) Does it establish conviction?

(5) Does it produce action?

Still another qualification which might be mentioned, particularly for such products as ethical pharmaceuticals or cosmetics, would be, is this color compatible in its suggestion with the character and the personality that you desire to create for your product.

Perfume Packaging and Selling

Beauty Fashion has just completed the first panel investigation employing the Beauty Fashion Panel of Perfume and Cosmetic Salesgirls. This panel is formed of salesgirls in department, drug and chain stores who are graduates of the Cosmetic School of Beauty Fashion.

According to this jury of front-line opinion, perfume sales did not drop appreciably in 1948. Seventy-four per cent of these girls stated that their perfume sales were equal to or greater than their volume for 1947. These reports confirmed the evidence of the excise tax collections for cosmetics and perfumes which show that even though manufacturers' sales fell off in varying proportions in 1948, the consumer still continued the high rate of spending of previous years.

There is some indication that somewhere around $100,000,000 in distressed merchandise and top-heavy inventory in perfumes and cosmetics were purchased last year by the consumer, and that this volume, or a considerable portion of it, was substracted for the one year from manufacturers' sales.

Seventy per cent of these salesgirls believe that the beautiful perfume packaging is justified and only 30 per cent feel that too much money is invested in the package.

Sixty-seven per cent of these sales people believe that women really read and study perfume advertisements carefully, but they believe that perfume advertising while being dignified and artistic should have a warmer, more human touch and should include the price of the perfume.

In view of these statements, it is interesting to note that 58 per cent of these salesgirls believe that "word-of-mouth" sells more perfume than advertising; yet 80 per cent th'nk that advertising has much more influence than editorial publicity in selling perfumes. This comprehensive survey of the factors entering into the sale of perfume at the retail counter is the first survey conducted by the newly formed, national panel of cosmetic salesgirls by Beauty Fashion. The story of this survey appeared in the March issue of Beauty Fashion. Several other studies of cosmetics and cosmetic marketing problems by means of this panel are planned for the balance of the year.

Expanding Display Carton

Pine Bros. are sampling these glycerine tablets in retail stores with the use of an expanding basket for jumble display designed and manufactured by Robert Gair Co., Inc., New York.

This is a display that is a complete unit and easily set up by the retailer.

When the cover is lifted and the two expanding sides pulled out and the

sample products jumbled in the box, it makes a quick, convenient counter display, the blue of the basket in pleasing contrast to the jumbled sample packages.

Service Costs Money

Recently the farm magazines have been emphasizing that marketing is now the number one problem of agriculture. In the last generation or two, improved production methods and machinery have made enormous strides in increasing the output per man hour on the farm.

In certain basic crops, such as wheat and corn, it is probable that the increase in production per man hour far exceeds the accomplishment by industry, and so it can be said on the farm, as well as in the factory, that the great efficiency and inventive ingenuity of America in increasing the ability of man to produce much more within a given period has been absorbed and lost by the increasing costs in distributing these goods.

There has been some advertising in the business magazines by the larger food packers emphasizing that the farmer has been getting practically half of the consumer dollar. Many businesses with far more direct routes to the ultimate consumer for their products, and with less processing involved in making their products suitable for the consumer, would consider this an enviably good record.

A recent issue of the Rural New-Yorker with an article entitled, "Marketing-The No. 1 Project," gives an excellent detailed case history of a major food product, that is the California orange. It will be noted in this basic case history that the direct sales agency of the farmer, that is the California Fruit Grower's Exchange, received 48.5 per cent of the consumer dollar, a record in efficiency in marketing which the vast majority of manufacturers could well envy.

The fact that the farmer received 25.7 per cent of this dollar for the naked fruit as it stood on the tree appears to strike this farm journal as a startling, unfair share of the consumer dollar.

We quote here the words of this article describing this case history in distribution. To us it seems a model of efficient, economic distribution under our present system of packaging, shipping and in securing a steady flow and a balance of many multiple markets widely dispersed.

"Imagine a consumer in New York City. He bought oranges in 1948 from the retail store at a rate of $6.84 a box. The retailer really served as the purchasing agent for the consumer; he handled the money. Of the $6.84 that he received, he kept $1.77 (25.9

. . . and what woman isn't when she has a Prang Textile Color Kit? This handy kit makes decorating fabrics such a fascinating hobby, for it includes everything for producing colorful designs on aprons, curtains, table-cloths, and for dozens of other home brightening uses.

The American Crayon Company, of Sandusky, Ohio (the people who make Prang Textile Colors) have selected Crown Lug Caps as closures for this product. These caps provide a dependable seal and re-seal with a quarter turn on or off, a feature of practical satisfaction for the feminine user. Like all Crown Closures, Crown Lug Caps are made to exacting standards of precision manufacture.

All of Crown's accumulated sealing knowledge is available to manufacturers who use metal closures as part of their package. Why not make use of these facilities? A Crown Representative will gladly assist you in determining the best type of closure and liner for your products. Crown Cork & Seal Company, Baltimore 3, Maryland.
World's Largest Makers of Metal Closures.

CROWN CLOSURES

Approved by millions of housewives

per cent) and paid $5.07 to the jobber from whom he bought the box. The jobber in turn kept 43 cents (6.3 per cent), the railroad kept $1.32 (19.3 per cent), and the fruit exchange in California received the $3.32 (48.5 per cent) which was left. To this point in the narrative, then, it has cost 51.5 cents out of each dollar paid by the consumer to get the fruit to him from the packing shed in California.

The California Fruit Growers Exchange next took 18 cents (2.6 per cent) for selling and advertising the box of oranges. The packing operation took 98 cents (14.3 per cent), the picking and handling operations took 40 cents (5.9 per cent), and the grower got what was left, which means that he received $1.76 (25.7 per cent) for the fruit as it stood on the trees. That is the story of farm commodity after farm commodity in general terms in this modern year of 1948 just passed."

New Gair Process

A whole new field of artistic packaging has been opened up to users of folding cartons. Printing perfection that was formerly associated only with fine paper is now possible on standard folding carton stock. Packages that required outer paper wraps to carry the art copy can now have this effect on the carton itself.

This development has been achieved with two sheet fed gravure presses at the Piedmont plant of Robert Gair Company, Inc. They are the first presses ever to print folding cartons in this country by the sheet-fed gravure method.

The process uses interchangeable printing plates that are prepared almost "photographically" with little if any retouching. The method of making these plates permits the use of half tone screens much finer than any that have ever been used on folding carton stock. Color copy resembles hand painting due to the remarkable gradation of color values and the fidelity of reproduction.

This new sheet-fed gravure process is a combination of photo engraving and intaglio printing, using a thin volatile ink which dries instantly permitting very high speeds. This with the virtual elimination of register and made-ready problems, now offers to folding carton users a combination of beauty at moderate cost which should provide a valuable weapon in the battle for the consumers dollar.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of January 1949 as compared with the same period in 1947.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	–3	–2	Minneapolis	–2	–7
Baltimore	–2	+1	Milwaukee	–2	+2
Birmingham	+22	–1	Newark	–5	–9
Boston	+8	+3	New York	–5	+1
Chicago	+1	+2	Philadelphia	–4	–2
Cincinnati	–2	+6	Pittsburgh	+5	+3
Cleveland	+3	0	Providence	0	–3
Dallas	X	X	St. Louis	–7	+1
Detroit	+2	+8	San Francisco	+6	–8
Los Angeles	0	–6	Seattle	–9	–1

Gift Packaging

Reports received from a number of manufacturers and package supply houses indicate that there will be a great deal more activity in Christmas packaging this year than there was last year. There are many factors which point in this direction.

After two rather disastrous years, that is 1946 and 1947, in which the industry pushed into the retail trade more goods than the consumer would accept under changed post-war conditions, last year gave every evidence of hitting bottom in gift packaging and turned out to be a very favorable year from the viewpoint of returned goods.

This last Christmas proved to be a turning point in another fashion,—that is the timing of retail buying and the timing of consumer purchases went back in a complete way to the pattern of pre-war years. There seems to be much less of the negative attitude toward gift packaging which was so prevalent during 1947 and the early part of 1948.

Retailers have now turned again to the realization that the gift package is a substantial part of the sales of perfumes and cosmetics and that they cannot retain a healthy volume of business in their departments without a constant stimulus in this direction.

There seems to be a growing demand among retailers for new products, new product variations and new packaging. This feeling is based upon their own observation in the way standard products and pre-war packages are lagging behind in sales, and the way that anything new that comes out, and which seems to have any sort of a flair about it, receives public response.

Manufacturers are already beginning to view this Christmas season with a very hopeful eye. They discovered last year that intelligent selling which did not overload the retailer and which was based upon his normal capacity to sell, would not swamp them with returned goods after the Christmas season. They also realize that if they are going to come out this year with any decent sort of volume, that their best hope is for a presentation of goods stimulated by very active promotions which will make the second six months a period of good business.

This first quarter has been very disappointing to most manufacturers, and while there are signs of a pick-up for the second quarter, any optimism that can be found in the trade for good business this year is based very largely upon the plans that they are making for package presentations in August for fall business.

More for the Hair

Harriet Hubbard Ayer is introducing a Complete Home Permanent. This is a package which contains the home permanent, plastic curlers, a cream rinse and a cream shampoo.

The cream shampoo and the cream rinse will also be sold as separate packages. The cream shampoo is packed in an opal jar which looks like a graceful urn which flairs at the bottom and nips in slightly higher up so that it can be held easily with wet hands, while using the shampoo.

The cream shampoo is also packaged in a collapsible tube.

NEW PRODUCTS AND NEW PACKAGES

BURROUGHS WELLCOME & CO. announces "Tabloid" brand Diphenan for oral treatment of oxyuriasis (pinworms). To the 209 millions who are hosts to these intestinal dignitaries, "Tabloid" offers a relatively non-toxic relief.

NATIONAL DRUG COMPANY'S AVC (Allantomaide Vaginal Cream) is now called AVC Improved, indicating the addition to the formula of a new antiseptic agent, 9-aminoacridine. Specific for vaginal trichomoniasis, the new product is also effective in the treatment of moniliasis.

WYETH INCORPORATED recently has developed Hydase, Lyophilized a new aid to hypodermoclysis and local anesthesia. This highly purified form of hyaluronidase, frozen-dried, is supplied in vials of 150 TR (turbidity-reducing) Units, ready for solution and use.

SCHIEFFELIN & CO. have placed on the market Penicillaine Troches, a combination of penicillin and benzocaine for corrective action and symptomatic relief in the local treatment of oral infections. Each troche contains 5,000 units of penicillin and 21.59 gm benzocaine.

CHAS. H. PHILLIPS COMPANY has now added for the first time a 5½ ounce "Economy Size" package to its line of Phillips' Milk of Magnesia Tooth Paste. The new size will retail at 75 cents and be fair traded at 59 cents.

SHARP & DOHME, INC., announces the release of Merameth, a solution of sulfamerazine and sulfamethazine with a wide spectrum of usefulness in the parental treatment of bacterial infections in animals.

WINTHROP-STEARNS INC. announces the addition to its catalogue of Procaine Penicillin G for aqueous injection. It is available in a 5 dose vial, containing 1,500,000 units.

ANN HAVILAND'S new talcum powder is presented in seven fragrances . . . Lily of the Valley, Blue Hyacinth Wood Violet, Purple Lilac, Carnation, Gardenia and Perhaps . . . to tie in with the toilet water and soap.

WHITTIER LABORATORIES now makes available Resmicon, Acid Absorbant Demulcent, affording combined action for the relief of pain and mechanical protection for the healing ulcer. Resmicon provides in one tablet 500 mg. of polyamine anion-exchange resin and 170 mg. of pure gastric mucin.

DR. HESS & CLARK, INC., introduces NFZ, a new product for treatment of cecal coccidiosis and pullorum of chicks. The active ingredient is nitrofurazone, a synthetic chemical derived from corncobs and other farm wastes.

SHARP & DOHME, INC. has announced the release of Tronic Compound, a pleasantly flavored vitamin B-complex, amino acid preparation designed for dietary supplementation and vitamin B therapy. Tronic Compound is supplied in pint and gallon bottles.

BRISTOL LABORATORIES INC. presents Flo-cillin "96" Fortified, an improved form of Flo-cillin "96" which combines high initial blood levels and a sustained therapeutic concentration of penicillin over a period of 96 hours following a 1 cc. injection.

CUTTER LABORATORIES has added Pertussis Vaccine Alhydrox for active immunization of whooping cough to its line of pediatric immunization agents. Designed for use in infants, each cc. of Pertussis Vaccine Phase I Alhydrox contains 30,000 million H. pertussis organisms.

ARMOUR & CO. introduces its new Mayfair cosmetic group in a quaint and delicate package inspired by "old world" tradition. The package design was created by Robert Sidney Dickens & Associates. The new group of toiletries includes dusting powder, bath bubbles, cologne, hand-lotion and sachet and incorporates the fragrance of the Mayfair scent.

NESTLE-LEMUR COMPANY has added lurium, a new scientific color ingredient to Nestle Colorinse. With the addition of lurium, Colorinse has been packaged in a new box, featuring a full colored photograph of a model illustrating the hair color type of the shade contained in the package.

BRISTOL LABORATORIES INC. has placed on the market Penettes, a penicillin chewing gum flavored with peppermint and containing 10,000 units of penicillin in each piece. Recommended in the treatment of Vincent's infection, Penettes are packaged in bottles of ten.

IVES-CAMERON, INC., present Monitan, a palatable solution of sorbitan monooleate polyoxyethylene derivative (S.M.P.D.). Each 5 cc. of Monitan contains, in a flavored aqueous sugar and glycerine base, 1.5 Gm. of S.M.P.D. The product is an emulsifier of fats, permitting their greater absorption and utilization.

CUTTER LABORATORIES announces the availability of Dihydrostreptomycin Sulfate, a highly purified product derived from streptomycin and indicated to be used in patients hypersensitive to streptomycin. To be injected intramuscularly, the product is supplied in 20 cc. vials each containing 1 gram streptomycin base.

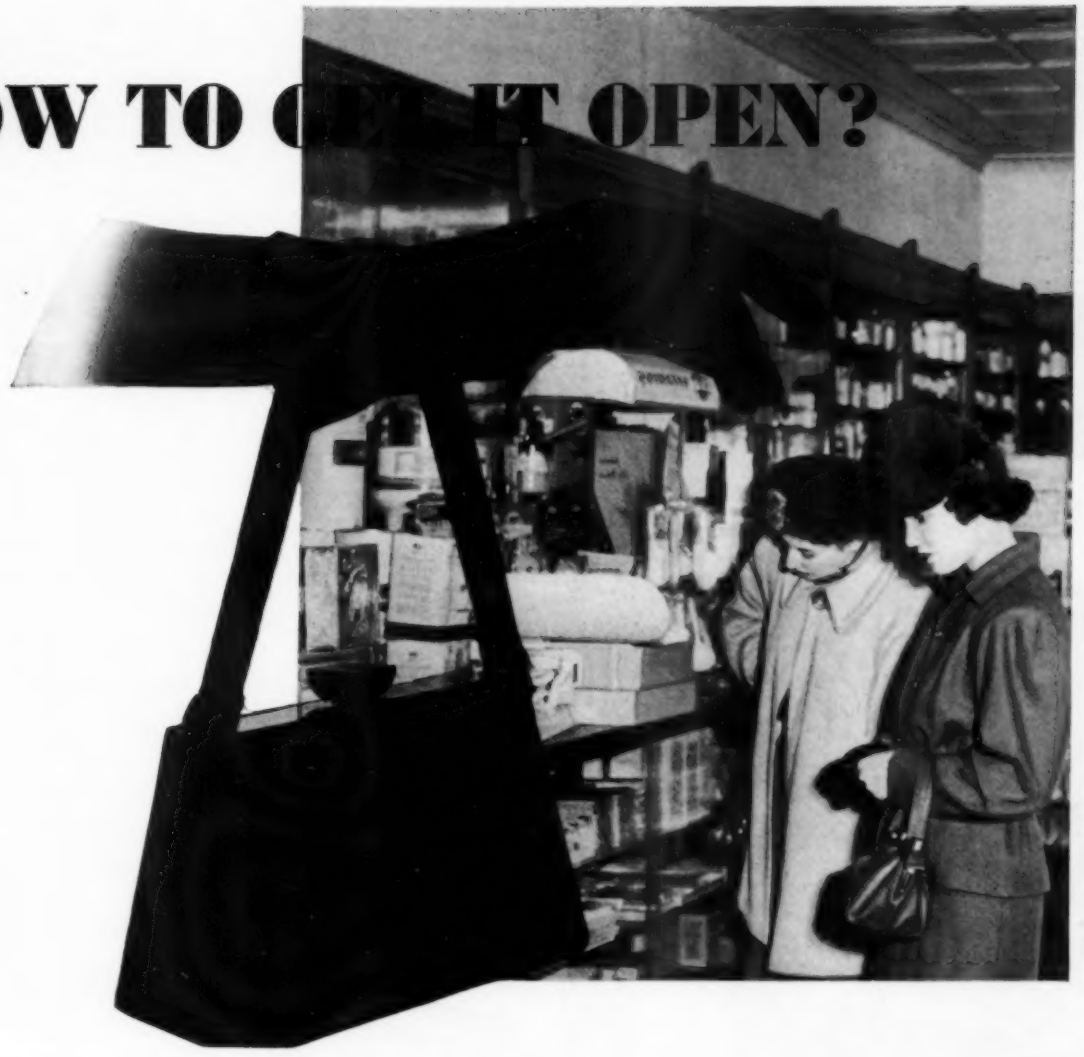
ORGANON INC. has introduced a new heparin preparation, Liquaemin (High Potency) "Organon," containing 50 mg. of heparin sodium per cc. of solution. This product is well suited for use in the intermittent injection method for administering heparin.

COLONIAL DAMES, INC. recently has released to the market its Colonial Dames Bath Bubbles in a new package. The package contains twenty packets of five fragrances . . . Sweet William, White Lilac, Colonial Bouquet, White Rose and Gardenia.

PEGGY SAGE has designed a new package for Spring and Summer promotion . . . the Finger Rest Package, an original idea to increase the ease of home manicuring. The package contains manicure polish in an assortment of the fastest selling shades, the Peggy Sage Lubricant Polish Remover and cotton in a dispenser.

TUSSY COSMETIQUES will introduce Beach Coat, a new suntan preparation, during the month of June. Beach Coat is a non-greasy, non-sticky, quick-drying lotion that does not pick up sand, nor does it cause oily spots on beach towels and bathing suits.

HOW TO GET IT OPEN?



Significant answers to an old question —
the most important one in business!

The problem of opening a woman's purse is the primary problem of every company selling through retail channels. For all the things that women buy, and they buy the bulk of everything sold, more purses are opened by appearances than by any other factor.

In the sharp competition that characterizes the sale of most packaged products, superiority of appearance is attained only by superiority in *all* of a package's elements . . . starting with its boxboard. The slight premium a manufacturer pays for the *best* in boxboard — so slight it is infinitesimal in relation to over-all costs — is his best insurance of packages that will open purses.

Clay-coated boxboard is universally conceded to be the best type of boxboard . . . but there are clay-coateds *and* clay-coateds. The Ridgelo product, for example, has a coating about *three times* as heavy as that of the so-called "machine coated" boxboards. Not only is Ridgelo made with a heavier coating, it is made with *different types* for letterpress, lithograph, and gravure reproduction.

The results include a surface that will stand up . . . that is amazingly smooth, bright, and white. They include reproduction qualities assuring excellent halftone detail, perfect contrast of whites and solids, and even "lay" of inks. Made in a range of thicknesses from .015 to .030, Ridgelo is *custom-made* to accord with the particular requirements of each customer.

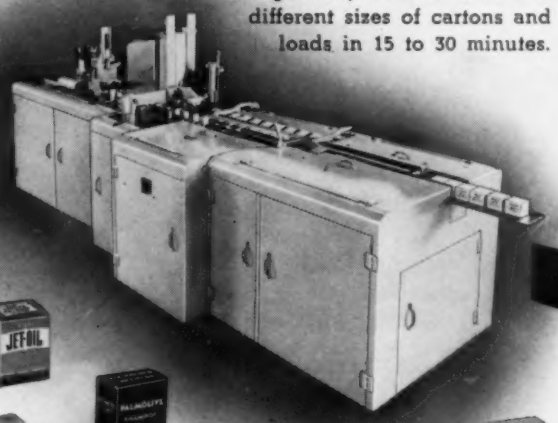
Ridgelo CLAY COATED BOXBOARDS

MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

REPRESENTATIVES

H. B. Royce, Detroit • Philip Rudolph & Sons, Inc., Philadelphia
A. E. Kellogg, St. Louis • Norman A. Buist, Los Angeles

Jones Constant Motion Cartoners fold and insert leaflets and booklets, feed and insert protective corrugated liners, tuck or glue ends of cartons – airplane or reverse tuck, print or stencil codes, feed and count small articles from hoppers or magazines, are convertible to different sizes of cartons and loads in 15 to 30 minutes.



RAZOR BLADES

Jones Constant Motion Cartoners automatically detect and indicate any short count, broken blade or wrapper without a blade. Speeds of 200 or more per minute.

BOTTLES • JARS • VIALS

Bottles, jars and vials particularly need the gentle handling of the Jones Constant Motion Cartoner. Gradual, unhurried transfer to individual buckets is made by the infeed star wheel; and from buckets into cartons by the F. P. Loader. Automatic overload releases further protect the load. Speeds of 200 per minute are possible on many products.

TUBES

High speed (150 to 200 per minute), gentle handling, and rapid conversion to different sizes characterize the Jones Constant Motion Cartoner for tubes. When tubes are placed in the buckets manually, the standard no load—no carton automatic is particularly useful, insuring that no empty cartons pass through the machine.

OTHER PRODUCTS

Many patented mechanisms have been developed, and refined, to handle a wide variety of products from candy mints to facial tissue. The adaptability of the Jones Cartoner is indicated by the products shown here.

a majority of America's cartoned products are JONES cartoned

. . . and a majority of the manufacturers whose products are shown here have given the Jones Constant Motion Cartoner the most sincere of all testimonials —reorders.

Today's high speed Jones Cartoner is the product of 28 years of designing and building carton loading machines. Superior in design and construction, it handles both carton and load faster, more positively, more gently, and with greater efficiency.

Successful, cost-conscious manufacturers such as these have selected the Jones Constant Motion Cartoner. They know that only the finest cartoning machine will give them the lowest cartoning cost.

We will gladly supply you with complete information to permit you to compare your present cartoning methods – **and costs** – with Jones cartoning.

R. A. JONES & COMPANY, INC.

P. O. Box 485
CINCINNATI, OHIO

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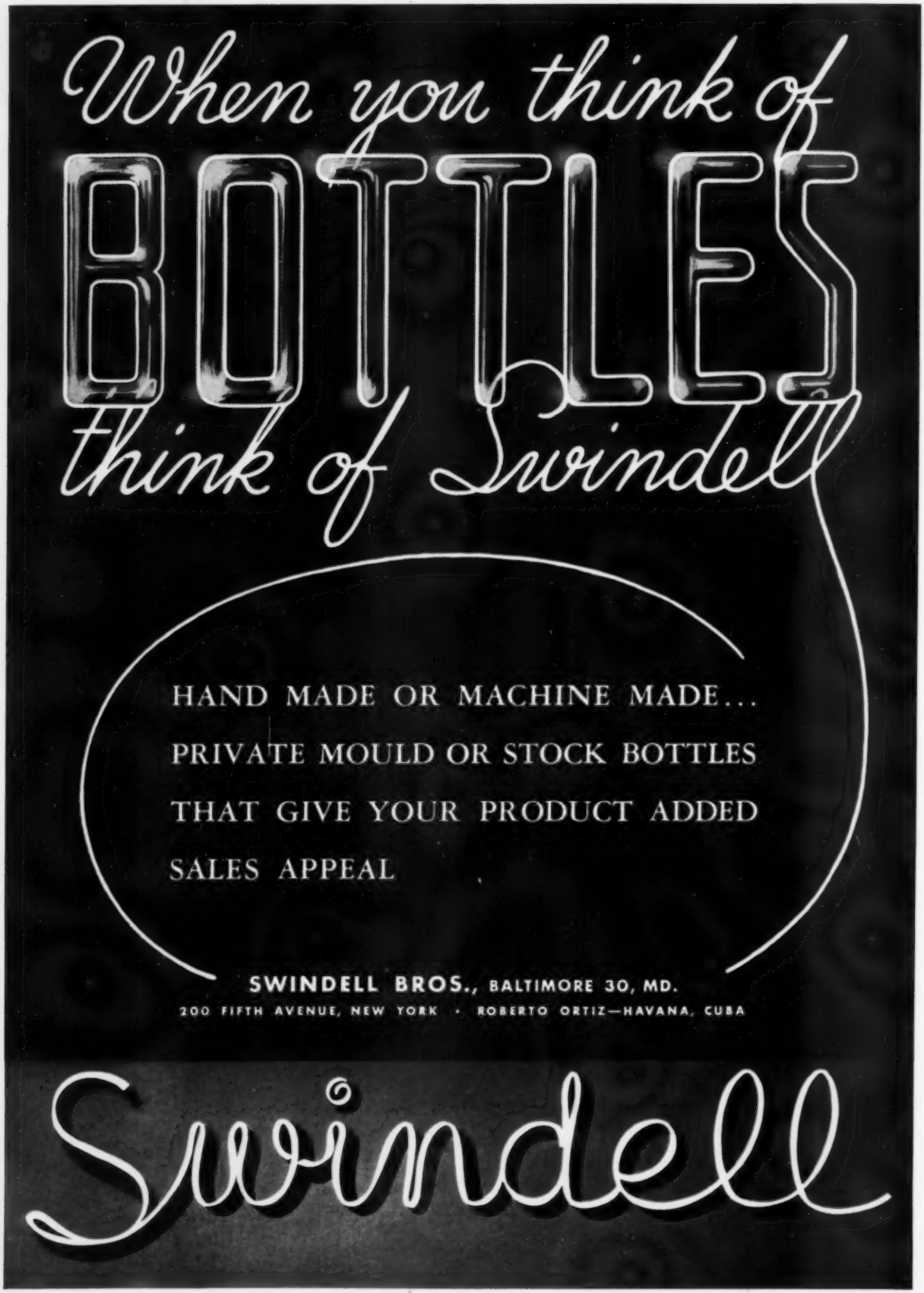
When you think of
BOTTLES
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HAND MADE OR MACHINE MADE...
PRIVATE MOULD OR STOCK BOTTLES
THAT GIVE YOUR PRODUCT ADDED
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THE DIVERSIFICATION OF *New Perfection* DROPPING PARTS

Simplifies Your Packaging Problem

The wide variety of sizes, styles and colors in New Perfection's complete line of dropping parts offers the answer to your packaging problem. Each component part is designed to present and administer your product in the most attractive, convenient manner. We supply dropping parts to fit your bottles or furnish the complete unit.

#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

3#

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Single shell metal cap; oil-resistant Amekine synthetic rubber bulb (without strong odor); blunt glass.

DROPPER GLASSES CAN BE CALIBRATED IN COLOR

An inexpensive extra that adds great convenience to the use of your preparation. The dosage you desire in the color you specify is accurately and permanently printed on the dropper glass. Trade-marks and firm names can also be imprinted.

#2

Non-rolling, extra-depth Bakelite cap; thick-flange rubber bulb; special bent glass, plain or CALIBRATED.

New Modernistic bottle. Designed to lie flat for convenient labeling. Oval front provides ample label space.

RUBBER BULBS are supplied in many styles and colors. Non-swelling **AMEKINE** synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS of plastic or metal can be furnished in a complete range of sizes and colors.

DROPPER GLASSES are available in a wide variety of styles and sizes; plain or CALIBRATED in any color to mark specific dosages.

BOTTLES in an attractive modernistic style in Amber, Blue, Green or Clear glass are available, with dropping parts, in the following sizes: 2 cc, ⅛, ¼, ½, 1 and 2 oz.

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PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

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Anchor Amerseal* Caps

EASY access to contents encourages more frequent use of the product by housewives. This, in turn, means more repeat sales for you.

Anchor Amerseal Caps were designed and developed with feminine fingers in mind. They remove and reseal with an easy, simple quarter-turn—won't stick, gum or freeze to the container finish.

Not only are *Amerseals* the easiest closures to remove and reclose, they reseal as effectively the hundredth time as the first.

Anchor Amerseal's lug construction makes these advantages possible . . . help women to more easily use and more fully enjoy your fine products.

Write us for more information and samples for test purposes.

*Trade-Mark

ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio

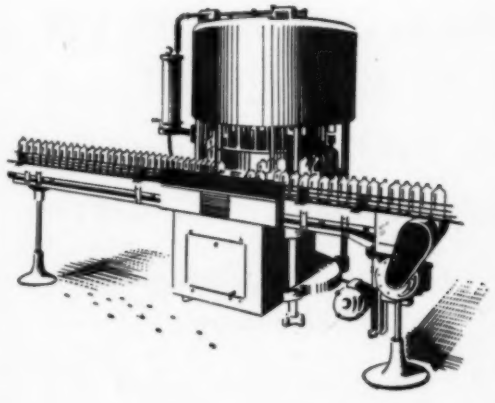
FILLING IS FAST AND ACCURATE in Uniform Anchorglass*

HIGH speed filling requires uniform containers . . . containers that are uniform in height, in neck and body diameter, in capacity, in finish.

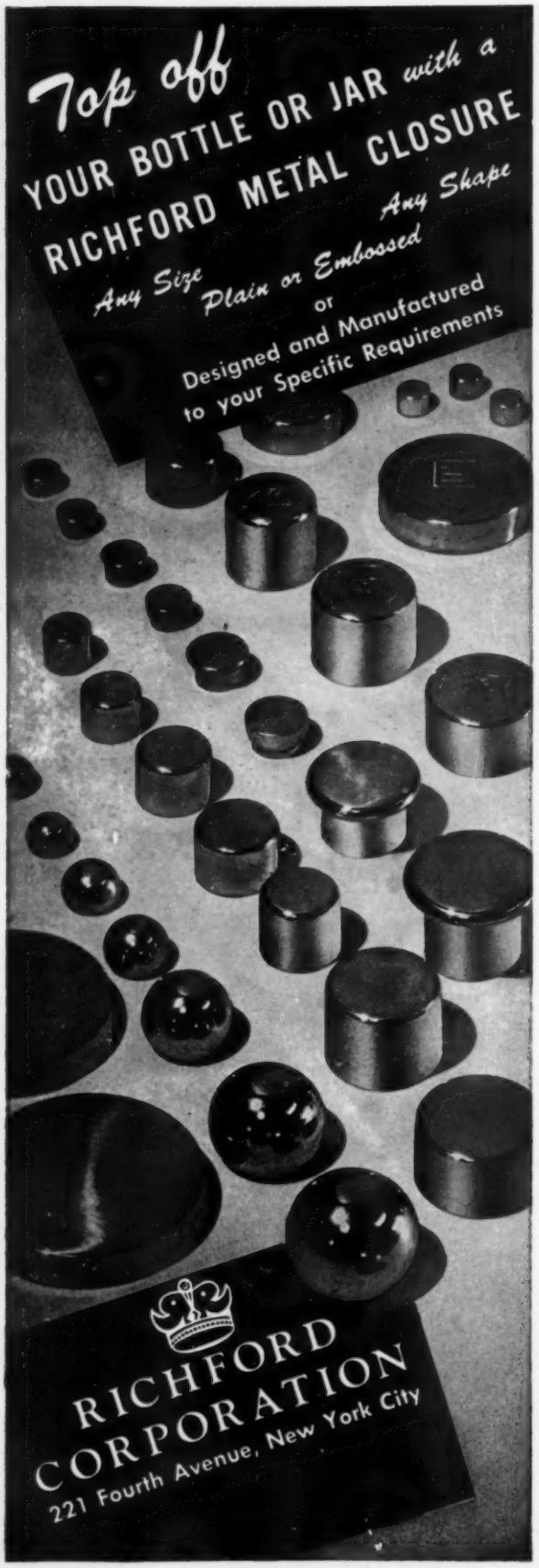
Consistency in manufacture, even distribution of glass, accurate temperature control in annealing, quality control through laboratory tests and regular inspections in every plant make and keep *Anchorglass* containers uniform . . . keep them going through your filling and other operations in clock-like fashion.

Sparkling *Anchorglass* containers are supplied in all standard styles, capacities and finishes, in crystal, amber or emerald green glass. Samples for test or comparative purposes gladly supplied on request.

*Reg. U. S. Pat. Off.



ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio



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From Agitators to Wrapping Machines

Drug and Cosmetic Review is the source book on where to buy drug and cosmetic manufacturing and handling equipment.

Alphabetically listed is every type of equipment used in this industry.

Descriptive paragraphs under each listing describe the operation of each type of equipment.

Full story, many in catalog form, of where to buy and who to buy from.

An invaluable reference book for plant managers, purchasing agents, executives.

DRUG AND COSMETIC REVIEW

1948-49 Eighth Edition

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These jars are made of the finest quality opal glass. They are truly white and have a consistent density that prevents the "show-through" of uneven fills or contents that are dark in color. They are ideal containers for both cosmetic and medicinal products. Carr-Lowrey Opal Jars are available in a complete range of sizes from ½ oz. to 16 ozs.

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Lipstick Containers --- Swivel, Slide, Automatic

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Other Special Metal Products
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Established in 1909

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Your product stays dry in Wheaton SNAP-CAP vials

These handsome crystal-clear glass vials with smart jewel-like caps of Polythene are ideal for all hygroscopic products. Manufactured to very close tolerances so that there is assured an exact fit between SNAP-CAP and VIAL. Caps stay put regardless of temperature changes. Extremely light weight but very strong and always uniform. Breakage reduced to a minimum. A complete range of sizes. SNAP-CAPS can be made for any private mould container regardless of size, capacity or color. Caps available in color and in private design on special quantity orders. Aluminum tamper-proof seals available.

Write for samples and laboratory reports on the moisture-resisting performances of SNAP-CAP VIALS.

WHEATON GLASS COMPANY Millville, N. J.
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Wheaton SNAP-CAP VIALS

Look for the Wheaton Exhibit at the Packaging Exposition, Convention Hall, Atlantic City, May 10 to 13.

NEWS...

Baldwin with Winthrop-Stearns

Keith M. Baldwin has been appointed assistant technical director of the special markets industrial divison of Winthrop-Stearns Inc. He will specialize in

KEITH M. BALDWIN

technical sales service on vanillin, assisting Dr. R. C. Sherwood, technical director.

Mr. Baldwin formerly was technical supervisor for Sheffield Farms, Inc. He was graduated from Hamilton College in 1940, majoring in chemistry. He got his Master of Science degree at Cornell in 1942. During the war he served as Captain in the Quartermaster Corps.

Schering Appoints Sales Executives

Francis C. Brown, president of Schering Corporation has made known the appointment of Allan A. Miller to the position of assistant domestic sales manager. Mr. Miller has been metropolitan New York division supervisor since 1946. He joined Schering in 1942. In his new position he will assist Herman W. Leitzow, domestic sales manager, and Dr. John N. McDonnell, Schering vice president in charge of domestic and foreign sales and promotion.

Newell S. Rand, presently professional service representative in New York has been appointed domestic sales office manager, with headquarters in Bloomfield, N. J.

M. M. Taliaferro, who has just completed a year's supervisory training has assumed a new position as Gulf district supervisor in the Southern division.

Richard L. Rychel, who has also completed a year's training has been appointed as New Jersey district supervisor in the Metropolitan division.

Centaur-Caldwell Names Taflan

Stanley I. Clark, vice president of Sterling Drug Inc., in charge of the Centaur-Caldwell division has announced the appointment of Glen D. Taflan as head of the control laboratories in the plant at Monticello, Ill.

Mr. Taflan is a graduate of the University of West Virginia and has been associated with Sterling since 1934, with the exception of service during the war with the Signal Corps.

Boyd Succeeds Shea as Emerson Treasurer

Benjamin Boyd has been elected treasurer of the Emerson Drug Company succeeding Hamilton Shea, who resigned to accept a post in the management consulting field, Kenneth A. Bonham, chairman of the company, has announced.

Named to Parke, Davis Posts

Dr. George Rieveschl, Jr., has been appointed director of chemical research of Parke, Davis & Company, and Dr. Leon A. Sweet has been named director of research and products development. Dr. Sweet has been with Parke, Davis since 1933. He was appointed director of chemical research and products development in 1945.

Dr. Rieveschl joined the company in 1943 as a senior research chemist and was primarily responsible for the development of Benadryl, used in the treatment of allergies.

Dr. Oliver Kamm has been named research consultant. He will also act as a scientific contact man between Parke, Davis and educational and scientific laboratories in the U. S. and foreign countries. Dr. Kamm has been with the company for 29 years.

Named Organic Chemicals Head

Ernest Nathan, president of Warwick Chemical Company, division of Sun Chemical Corporation, has announced the appointment of Walter E. Scheer as general manager of its newly created organic chemicals department, with headquarters at the main office of the company, Tenth St., and 44 Ave., Long Island City, N. Y.

Mr. Scheer has been a chemical consultant for the past several years and president of the Scheer Chemical Company, Inc. Before that time he was associated with Hardesty Chemical Company, Inc., and its affiliate, Amecco

WALTER E. SCHEER

Chemicals Inc., where he was vice president in charge of sales.

The organic chemicals department is a new group in the Warwick organization which will concentrate on the production of industrial organic chemicals for all industries and on the development of household, industrial and other non-textile uses for synthetic detergents. New production facilities for the department are being installed at the Warwick Chemical division plant at Wood River Junction, R. I., and large scale commercial production of several new products is expected to begin in the very near future.

Brennan Leaves Bourjois

John B. Brennan has resigned as sales manager of Bourjois and Barbara Gould. Announcement of his plans are to be made in the near future.

At the same time Paul H. Douglas, president of Bourjois, Inc., announced the election by the board of directors of Norman F. Dahl as vice president in charge of sales and advertising.

Robert L. O'Brien, formerly wholesale salesmanager, and Nelson Millard, former executive in the sales department, will serve as joint sales managers.

Poineer Water Conditioning Firms Join Forces

Two old timers, Elgin Softener Corporation, Elgin, Ill., and Illinois Water Treatment Company, Rockford, Ill., long leaders in the water conditioning field have joined forces.

In commenting upon the new alignment, Chester T. McGill, who heads the Elgin organization, explained that over-all purpose is to provide a better, more complete water conditioning service at minimum cost to the user.

Under the new set-up, each company will maintain its name identity and personnel. Associated with Mr. McGill in the organization are E. W. Scarritt, C. Scribner and B. F. Willey, each of whom has had some twenty years experience in the field. W. S. Morrison and P. H. Caskey, of Illinois Water Treatment pioneers in the development of de-ionizers, are authorities in the field of ion exchange.

John Lantz Honored

John J. Lantz, associated with Chas. L. Huisking & Co. since January 11, 1916, was honored at a dinner at the Wool Club tendered by the company upon his retirement February 28.

Born in Erie, Pa., December 13, 1881, Mr. Lantz spent his boyhood on the East Side of Manhattan, and started his business at the age of 13½ years as a cash boy for Lord & Taylor, New York department store. Following this he spent 12½ years with Stallman & Fulton Co., wholesale druggists, then at 10 Gold St. Then he spent a short time in the New York office of Myer Brothers Drug Co. and the Atlantic Importing Co., and joined J. L. Hopkins & Co. in 1913. From there he went to Huisking in 1916.

Company President Charles L. Huisking reminisced about the early days of the company and of Mr. Lantz's association with it. He expressed words of regret at Mr. Lantz's retirement. Mr. Lantz was presented with an onyx electric mantel clock. William J. Dawson, who retired as treasurer of the firm on July 1, 1947, received a similar gift.

New Pharmaceutical Company

Dr. Albert D. Fisher, formerly technical director of Oxford Products, Inc., now heads the newly organized Midwest Chemical Development Corporation located at 1243 W. Third St., Cleveland, Ohio.

Associated with him as vice president and in charge of research and production is Dr. I. Levis, formerly on the Faculty of Case Institute of Technology and Fenn College.

The company will manufacture and develop pharmaceutical products of theraputic value, and also develop private formulas for tablets, capsules and liquids.

Penick Appoints Dysart

Ralph B. Dysart has been appointed Mid-Western sales representative for S. B. Penick and Company. He will make his headquarters in Chicago.

Mr. Dysart's father, T. B. Dysart, has been with the Penick Company for some thirty-five years as manager of the Southern plant at Ashville, N. C.

John J. Lantz is shown at the dinner given in his honor upon retirement from Chas. L. Huisking & Co. He is flanked by Peter A. Dirr, Huisking vice president, at the left, and Charles L. Huisking.

Chain Druggists Association Elects Sanders President

Merle A. Sanders, president of Snyder's Drug Stores, Minneapolis, has been elected president of the National Association of Chain Drug Stores, it was announced last week. John G. Bell, executive vice president of Peoples Drug Stores, Washington, D. C., was chosen vice president, and Carl Willingham, formerly the association's assistant secretary and treasurer, was named secretary-treasurer.

Standard Synthetics to Appoint Agent

Standard Synthetics, Ltd., essential oils, synthetics and isolates, London, England, is planning to appoint a sole agent for the United States in the near future. J. L. Hindle, director of the company, recently spent some time in New York renewing contacts in the trade and expects to appoint an agent for this country.

Awarded AIC Scroll

Dr. Donald B. Keyes, vice president in charge of planning and development for Heyden Chemical Corporation, New York, has been awarded the first Honor Scroll of the New York chapter of the American Institute of Chemists. The award was voted for his "service and devotion to young chemists." The award will be presented at a dinner at the Downtown Athletic Club on May 18. Dr. Keyes, who has been with the Heyden organization since 1946, was awarded the Honor Scroll of the Chicago chapter of AIC in 1945.

Retired From USI Post

Dr. William C. Moore has retired after twenty-nine years as a member of the research staff of U. S. Industrial Chemicals, Inc., and its predecessor company, U. S. Industrial Alcohol Company. He plans to devote part of his time to consulting work, with headquarters in Stamford, Conn. Dr. Moore was president of the Electrochemical Society in 1946-47, and has been active in the American Chemical Society since 1914.

Dr. Van Meter Promoted

Dr. H. Sheridan Baketel, president of Reed & Carnick, has announced the promotion of Clarence T. Van Meter, Ph.D., director of chemical and pharmaceutical research, to the position of director of research and control.

MAKERS OF AMERICA'S FINEST SOAPS FOR TOILET AND BATH

Hewitt

has the
"Know How"
to produce
America's Finest
SPECIAL LABEL SOAPS

For many years, Hewitt has made soaps to meet the needs of discriminating customers throughout America.

Hewitt's fine reputation has grown from their ability to produce and develop quality soaps to exacting specifications. Manufacturing equipment, testing facilities and development laboratories are complete in every way. Special Label soaps are made by experts who have had years of experience blending quality soaps from the finest materials.

Distinctive perfumes and other ingredients can be incorporated into soap formulas. Special label soaps add sales volume to toiletries lines and to cosmetic departments.

Write or telephone today. We will be pleased to talk with you about a Special Brand that will fit your sales program.

THE HEWITT SOAP COMPANY, INC.
Factory and Main Office • Dayton 3, Ohio
New York Office
47 West 34th Street • New York City

New Squibb Dept.

The organization of a new department, that of retail distribution, and the appointment of Harry J. Towers as its first manager has been announced by J. J. Toohy, vice president and

HARRY J. TOWERS

general sales manager of E. R. Squibb & Sons.

Mr. Tower's new position will be of interest to retailers in that Squibb for the first time in recent years will have an organization devoted to the administration of retail trade policies, sales terms, franchises and agreements with all Squibb retail distributors and hospitals.

Mr. Towers joined Squibb sales staff in 1943. After pre-medical work at both Washington State College and the University of Montana, he worked in retail drug stores and as a wholesale salesman.

Monsanto Chemical Sales Changes

Several changes in Monsanto Chemical Company's Organic Chemicals division sales force were announced by W. G. Krummrich, general manager of the division, and Robinson Ord, divisional general manager of sales.

Cyrus W. Merrell, who was in charge of pharmaceutical sales has become assistant general manager of sales. He will be responsible for field supervision, customer relations and branch office liaison. Mr. Merrell, with Monsanto since 1935, has been in the production and sale of pharmaceuticals since 1915.

Gerald F. Pauley, formerly general branch manager of the sales office in Chicago for the past 13 years, stepped up to Mr. Merrell's position in St. Louis. Mr. Pauley has had 21 year's production and sales experience with Monsanto. Last year he was president of the Chicago Drug and Chemical Association.

William M. Russell, at present branch manager for the division at Detroit, has been transferred to Chicago succeeding Mr. Pauley. He, in turn, was replaced by Forrest M. Luckett, now manager of the division's Cincinnati branch. Mr. Russell is a past president of Allied Drug and Chemical Association of Michigan and also of Detroit Paint, Varnish and Lacquer Association. He has been with Monsanto since 1937.

Mr. Luckett, who was one of the organizers and first president of the Cincinnati Drug and Chemical Association, joined the company in 1924.

Other appointments announced were those of Arthur A. Hibbeler, who will reside in Minneapolis, Minn., as assistant branch manager of the Chicago district, and Tullius C. Tupper and J. Glenn Hicks as assistant branch managers of the Detroit district. Mr. Tupper will reside in Cleveland, O., while Mr. Hicks will work from Detroit, Mich. The Detroit territory will be extended to include the present Cincinnati as well as the Cleveland territory.

The changes, effective April 1, follow the appointment of Charles H. Sommer, Jr. to the new position of assistant to Francis J. Curtis, company vice president. Mr. Curtis is coordinator of Monsanto's sales, advertising and foreign department activities.

A. H. Ross Name Changed

The A. H. Ross Company, Inc., has changed its name to Rockwell Packaging Machines, Inc. It continues as a subsidiary of the Rockwell Manufacturing Company.

At the same time, production and sales headquarters are being moved from Dayton, Ohio to the Rockwell

J. F. CURRINAN

plant at Hudson, N. Y. J. F. Currivan, vice president and general manager of the A. H. Ross Company continues in the same capacity with Rockwell Packaging Machines, Inc.

Named to Ordnance Post

Henry W. Gadsden, director of pharmaceutical production and engineering, Sharp & Dohme, Inc., has been named district chief of the Philadelphia Ordinance District.

H. W. GADSDEN

In this civilian post, Mr. Gadsden will serve on a part time basis. The military and civilian staff are supervised in their daily operations by the deputy district chief, an Army officer.

Mr. Gadsden, a Lieutenant Colonel during the war, served as executive officer of the Philadelphia Ordnance district from 1942 to 1946.

"4711" Officers

The board of directors of Ferd. Mulhens, Inc., makers of "4711" toilet preparations, has announced the appointment of Harold E. Horowitz as chairman of the board, and Oscar C. Olin as president.

Wirz Employees Honored

One hundred fifty-eight employees of A. H. Wirz, Inc., manufacturers of collapsible metal tubes, and now 113 years old, were awarded service pins for their service records ranging from five to fifty years at a dinner March 14.

Geiss Made Tek Hughes V.P.

Otto Geiss, who has been associated with Tek Hughes, Inc., since 1930, has been appointed vice president in charge of chain store sales, according to an announcement by James J. Flood, executive vice president.

MacDonald Recuperating

George R. MacDonald, Ungerer and Company, Inc., Pacific Coast sales representative is convalescing at his home from an appendectomy operation.

Dr. Cullen in Therapeutic Found. Post

S. Barksdale Penick, Jr., chairman of the board of the Therapeutic Research Foundation, Inc., has made known the resignation of Floy F. Johnson as secretary of the foundation. Mr. Johnson left to become affiliated with interests outside the drug field.

Dr. Frederick J. Cullen, executive vice president of the Proprietary Association, has been appointed by the board to serve out the unexpired term. The Incorporation will meet during The Proprietary Association convention at the Greenbrier Hotel, White Sulphur Springs, West Virginia, June 1-3, for the purpose of electing officers and transacting other business.

DCAT Dinner

Over 2200 leaders in the drug, chemical, cosmetic and related industries from all parts of the country heard Ferdinand Eberstadt, chairman of the Committee on the National Security Organization of the Hoover Commission call for the formulation of a clear and sound national security policy at the Annual Dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade March 10, at the Waldorf Astoria.

Robert B. Magnus, vice president of Magnus, Mabee & Reynard Inc., chairman of the DCAV presided. Tribute was paid to the memory of the late Ralph E. Dorland, former chairman of the DCAT and former president of the New York Board of Trade, by E.T.T. Williams, president of The Lambert Company, a member of the DCAT Advisory Council.

D & O Chicago Rep.

Dodge & Olcott, Inc., has announced the appointment of Kenneth W. Hartley as a sales representative in its Chicago office at 164 North Wacker Drive.

Norda Catalog

Norda Essential Oil and Chemical Company, Inc., has issued a 24-page price booklet of Norda flavors, completely listing the whole Norda flavor line for the food and allied industries. The booklet, first of a new series, is illustrated with views of the Norda plant and a reproduction of one of the most outstanding current Norda advertisements.

Copies may be obtained by writing to Norda Essential Oil and Chemical Company, Inc., 601 W. 26 St., New York.

Walter Conklin With Wallace Box

Wallace Ungenah, president of Wallace Paper Box Corporation has announced the appointment of Walter A. Conklin as special eastern representative for the company.

Mr. Conklin has been in the drug, cosmetic and allied industries for the past 25 years. He has been past president of the Foragers of America, one of the oldest organizations in the toilet goods industry, a member of the Chemical Salesmen's Organization and the BIMS.

Until recently Mr. Conklin has been associated with Alexandre de Markoff and Evans Chemetics.

Named Research Head

Dr. William H. Lycan has been appointed director of research of Johnson and Johnson, New Brunswick, N. J. He succeeds Dr. David F. Smith, recently resigned.

A graduate of the University of Illinois, Dr. Lycan has had many years experience in applied chemical research. For 8 years he was with the du Pont Company and for the last 11 years with the Pittsburgh Plate Glass Company, where he was executive director of research for the paint division.

Heads Sofskin Sales

John F. W. McClure has been appointed product manager in charge of sales and advertising for Sofskin Hand Cream, Kirby Peake, general manager of the Vick Brands division of the Vick Chemical Company has announced.

To Conduct Food & Drug Course for City

Arthur D. Herrick, New York food and drug consultant, attorney and author of several books on food and drug regulation, has been retained by the City of New York to conduct a course on food, drug and cosmetic regulation for Health Department inspectors.

A series of eight weekly lectures, that started March 14 will cover the entire subject of drug and cosmetic regulation with particular emphasis on current trends and developments in drug and cosmetic laws.

Elmo Dispute Settled

Elmo Inc., started in 1907 by Mary and Margaret Elmo, has been reorganized following ten years of litigation between the founding sisters and has begun sweeping moderization of promotional methods, product design and distribution.

The dispute begun in 1940 over control of the firm resulted in its being split into Elmo Inc., and Elmo Sales Corporation, with the latter concern acting as selling agent for Elmo, Inc. The two firms have now been reunited.

Jere Henshaw, who retired as the company's sales manager at the time of the split, has returned and is now president of Elmo Inc. Under the terms of the settlement Margaret Elmo retains two-thirds interest and Mary one-third.

de Lair Return to France

Francois de Laire, director general of the Fabriques de Lair of Paris, has returned to France by air after a three week stay in New York with Dodge & Olcott, Inc., the sole agents for the French firm in the U. S. and Canada. While here, Mr. de Lair discussed the market situation for perfume raw materials with most of the leading cosmetic manufacturers in New York.

Annual dinner for members of the Druggists Supply Corporation and its manufacturing associates tendered by Magnus, Mabee & Reynard, Inc., on March 5 at the Hotel Pennsylvania—oops sorry Statler. More than 400 were guests of the essential oil house on this occasion.

Smith-Dorsey Grant

Dr. Harold S. Morgan, president of the Nebraska Medical Foundation Inc., has announced a gift of $10,000 made by the Smith-Dorsey Company to the foundation. Fred W. Misch, general manager of the company stated in making the presentation that the Smith-Dorsey Company was glad of the opportunity of providing funds to stimulate research in the fields of pharmacology and medicine.

Abbott To Build in Cincinnati

Contracts have been let by Abbott Laboratories for the construction of a new branch office and warehouse building in Cincinnati, has been announced by R. E. Horn, president and general manager.

Measuring 145 by 205 feet the building will occupy a site fronting 332 feet on Dana Ave., and Woodburn Ave. It will be a one-story structure in modern factory style, with 22,000 square feet of space. One section will house the office now housed at 628 Sycamore St., the other will be occupied by the warehousing and packing department. Occupancy is scheduled for early fall. Harold Clauson is branch and division manager.

Lectrodryer Bulletin

A new bulletin issued by Pittsburgh Lectrodryer Corporation, is now available for distribution.

The bulletin is intended for non-technically trained readers as well as those familiar with the physics of drying any solid adsorption.

Copies of the bulletin, known as No. 216, may be obtained free by writing to Pittsburgh Lectrodryer Corporation, P.O. Box 1766, Pittsburgh 30, Pa.

U.S.I. Resin Plant in Operation

The dedication of the largest and most modern resin plant in the world, with the capacity of 100,000,000 pounds of resins annually, took place March 8, at Newark, N. J., when U. S. Industrial Chemicals, Inc., started operation of its new structure.

The event marked a milestone in the history of the company, which began the manufacture of resins, only eleven years ago.

In addition to the plant, a tank farm consisting of 33 tanks is on the property, they range in capacity from 15 to 50 thousand gallons, with a combined capacity of 700,000 gallons.

Dr. Lauffer Elected Mayor

Dr. Paul G. Lauffer, chief chemist for Geo. W. Luft for the past fifteen years, was elected Mayor on the Democratic and Independent Citizens Party ticket in Hastings-on-Hudson, N. Y. He is the first democrat elected in that section in 20 years.

DR. LAUFFER

Pierce, McKesson Asst. Sales Mgr. in Chicago

Herschel Pierce has been appointed assistant sales manager of McKesson & Robbins, Inc., Chicago. He was formerly district manager of the Animal and Plant Health department in McKesson's Mid-West region.

Before joining the McKesson organization in 1945, Mr. Pierce had spent four years in the retail drug business, two years in the electrical appliance field and five years as Western sales representative for Globe Laboratories.

Hendry Advanced by M & R

W. T. Hendry has been promoted to division manager of McKesson & Robbins, Inc., Columbus, Ga., succeeding J. F. Kerr, who will continue in an advisory capacity. Mr. Hendry was formerly operations and merchandising manager in that city. He has been with the McKesson organization for nearly 20 years, working up through the office, warehouse and buying departments to his present position.

Vanderbilt Booklet

Veegum, an emulsifier, thickener, and suspending agent, is the subject of a new illustrated, 42-page booklet put out by the specialties department of R. T. Vanderbilt Company.

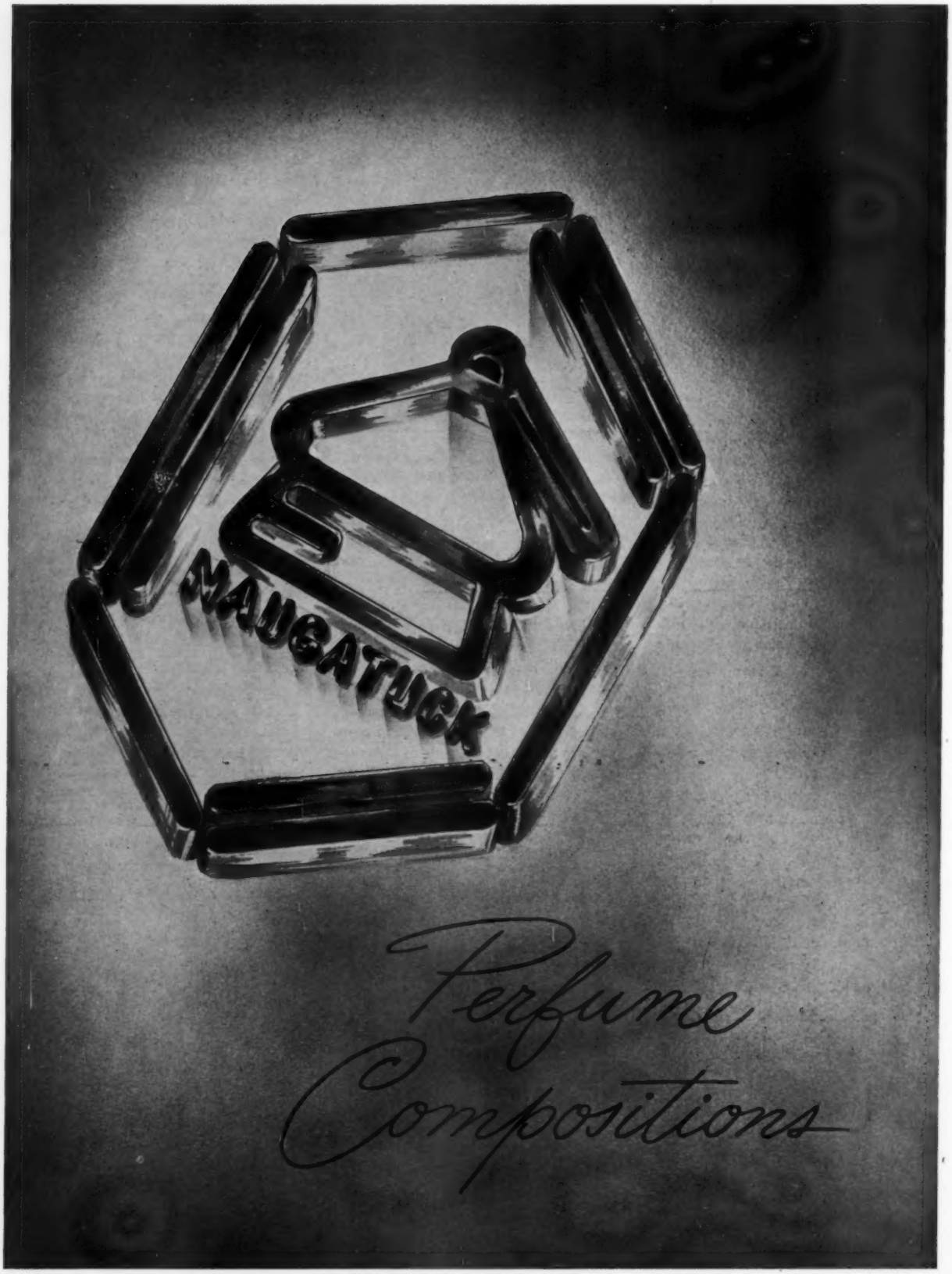
The booklet describes the product and its properties and can be used as a workbook of formulas for those directly concerned with the application of Veegum in drugs, cosmetics, and products for industrial uses.

Copies are available by writing to the T. R. Vanderbilt Company, specialties department, 230 Park Ave., New York 17.

Cosmetic Chemists to Meet

The Society of Cosmetic Chemists will hold its Spring meeting at the Biltmore hotel, New York, on May 20. The program for the meeting will include technical papers and discussion of subjects of particular interest to the cosmetic industry.

Northam Warren, Jr., and Oscar Pando, vice president in charge of South American operations for Northam Warren Corporation, attend a sales meeting of the Buenos Aires staff of Palmer & Co., its manufacturing distributor in the Argentine. Seated from left to right are: George R. Palmer, William D. Palmer, Mr. Warren, Charles E. Palmer, Mr. Pando and Percy Pond



NAUGATUCK AROMATICS

NEW YORK ★ CHICAGO

Joins Purepac Corp.

Purepac Corporation has announced that Jules J. Rosenman has become affiliated with its sales department. Prior to joining Purepac, Mr. Rosenman was for many years associated with McKesson & Robbins, Inc.

Robert Inc. Severs Connections With French House

Henri Robert Inc., 39 W. 60 St., New York, has announced that as of March 23, 1949, it has ceased representing Laboratoires Synarome, of Asnieres (Seine) France. This decision was taken by mutual consent and it in no way affects the friendly relations the two firms have been enjoying for many years.

Cleveland Drug & Chem. Club

G. E. Burke, vice president of Strong Cobb & Company, Inc., has been elected president of the Cleveland Drug & Chemical Club for the next twelve months. Harry Martinson, Standard Drug Company, was elected first vice president; Thomas B. Chadwick, Chas. Pfizer Company, is second vice president, and William Gusman, Bio-Chemical Laboratories is secretary and treasurer.

The newly elected executive committee members are: Tully Tupper, Raymond Shamel, Gerald Rose, Dewey Langle, Charles Blazier, Robert Gould, and Richard Wilson.

Jamieson Buys Paper Box Firm

Sale of Bartold-Schang Inc., fancy paper box manufacturer has been announced by George S. Bartold, president of the firm, and Walter J. Jamieson of New York, purchaser.

WALTER JAMIESON

The transfer included all assets of the company and Mr. Jamieson declared manufacturing operations, which were suspended on December 31, would be resumed as quickly as possible with the same personnel and plant organization.

Mr. Bartold, who had been with the company since its founding in 1903, and its president since 1944, said that his failing health, necessitated his retirement.

The firm will be known as the Walter J. Jamieson Corporation, successor to Bartold-Schang Inc., with Mr. Jamieson as president and treasurer of the company, and his wife Helen T. Jamieson, vice president. Joseph Richter is secretary.

Before forming his present company, Jamieson was treasurer and sales manager of the Wallace Paper Box Corporation of New York.

Joins Jamieson Corp.

Walter J. Jamieson, president of Walter J. Jamieson Corporation, successor to Bartold-Schang Inc., has announced the appointment of Frank Higgins as Eastern district manager for the firm.

Mr. Higgins had been with the Bartold-Schang company for the past ten years and has been associated with the drug and cosmetic industry for over twenty years.

Head's Cutter Blood Dept.

Earl Wilson has been promoted to the position of blood procurement director of Cutter Laboratories, Berkeley, California, according to an announcement by T. R. Sandberg, works manager.

Mr. Wilson will administer Cutter blood centers in San Francisco, Oakland and Los Angeles and will direct the paid donor program. A graduate of the University of California, he began work for Cutter in 1946.

Sharpe & Sheehan Formed

Thomas C. Sheehan, formerly New York sales manager for Helena Rubinstein, Inc., has resigned to organize his own company in partnership with Mr. George W. Sharpe. The firm will specialize in the manufacture and sale of plastic film merchandise. Sales office for the company is located at 122 W. 30 St., New York, and the factory is located in North Bergen, N. J.

Prior to his association with Helena Rubinstein, Mr. Sheehan was district sales manager for Lamont Corliss & Company for ten years. Mr. Sharpe was formerly general manager of Kings Associates and Eastern sales manager for Richards, Boggs & King and Kadar.

New Lab. for Parke, Davis

A new antibiotics laboratory has been completed for Parke, Davis & Company in Detroit.

Containing the most modern facilities, the plant will provide laboratory, development, production and administrative facilities. The building is 275 feet long and 75 feet wide, and has a full basement in addition to its four floors.

Gathered below are the officers of the Cosmetic Industry Buyers and Suppliers, also known as the CIBS, after a good meal at Toots Shore's New York eatery. The occasion was the monthly meeting of the CIBS where they were addressed by Joseph Keho of Dorothy Gray. Pictured here seated from left to right are: Bob Proom, Wallace Paper Box Company, second vice president; president Art Mulligan, Lehn & Fink; Paul Alexander, Drug & Cosmetic Industry, first vice president; Standing: Hugh Conklin, Warner G. Smith Company; Lawrence W. Carter, Ogilvie Sisters; George J. Schumacher, Chesebrough Mfg. Company; Ed Bush, Bush Aromatics; Henry Budd, Ungerer & Company; Dave Clark, Drug Trade News.

Tice on U.S.P. Committee

Professor Linwood F. Tice, assistant dean of the Philadelphia College of Pharmacy and Science, has been elected to membership on the U.S.P. Revision Committee to fill the vacancy caused by the death of professor A. G. DuMez.

Professor Tice brings to the work of the U.S.P. Revision many years of close affiliation with Pharmacopoeia work in the central office. As the editor of the American Journal of Pharmacy for a decade, his editorials have demonstrated farseeing and exceptional leadership on todays fundamental problems of professional pharmacy.

Joins N.J. Firm

Dr. Paul Minieri has joined the pharmaceutical research division of Wallace and Tiernan Products Inc., Belleville, N. J. He formerly was on the research staff of Chas. Pfizer and Company, Inc.

L. H. Bristol on Ad Council

At the annual meeting of the board of directors of the Advertising Council, Inc., Lee H. Bristol, president of Bristol-Myers Company, was elected a vice chairman.

Mr. Bristol has been an active member of the executive committee and serves as coordinator of the United America Campaign.

Van Dyk & Company Elects

At a meeting of the directors of Van Dyk & Company, Inc., Belleville, N. J., the following officers were elected: I. R. Hollenberg, executive vice president; Mrs. Samuel Isermann, vice president; Howard P. Isermann, secretary-treasurer; Helen V. Shanahan, assistant secretary. In memory of the late Dr. Samuel Isermann, the founder of the company, the office of president is being allowed to be vacant at this time.

Operations will be conducted under the direction of the executive vice president, Mr. Hollenberg.

Gillis and Young Advanced

John L. Gillis, director of Monsanto Chemical Company's foreign department, has been appointed acting general manager of the Company's Merrimac division with headquarters in Boston.

Mr. Gillis assumed the duties of Josiah B. Rutter, vice president and general manager of the division who has been hospitalized for an indefinite period. Mr. Gillis is succeeded as director of the foreign department by assistant director, Marshall E. Young.

A native of Fargo, N. D., Mr. Gillis attended Washington University in St. Louis. He became associated with Monsanto in 1933 as assistant export manager. He was appointed export manager in 1938, serving in that capacity until 1941 when he became general export manager and assistant director of the foreign department. In 1944 he left Monsanto to become vice president of Johnson and Johnson International, but returned to Monsanto in 1946.

Mr. Young, a native of Chicago, joined Monsanto in 1934 as a member of the service department. In 1935 he was transferred to the export department and in 1944 he was appointed general export manager.

New S.K. & F. Quarters

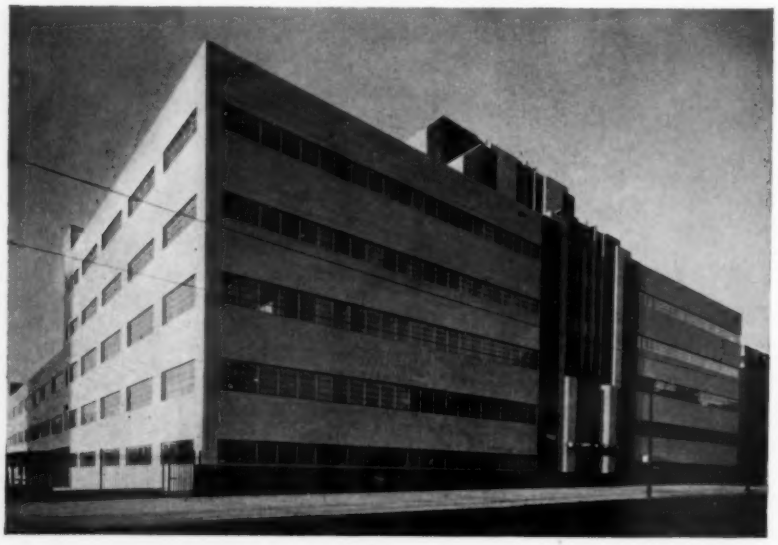
Smith, Kline & French Laboratories exhibited their new home at 1530 Spring Garden St., Philadelphia, on March 16. Upwards of six hundred guests, including a very large percentage of doctors who represented a "Who's Who" in the medical profession, inspected the research and manufacturing laboratories and the sessions on the clinical problems of advancing years.

The morning panel on cardiovascular conditions was under the chairmanship of Dr. Eugene A. Stead, Jr., Duke University School of Medicine, and participated in by Dr. Arlie Ray Barnes, Mayo Clinic, Mayo Foundation Graduate School, University of Minnesota; Dr. George E. Burch, Tulane University School of Medicine; Dr. Harry Gold, Cornell University Medical College; Dr. Robert Wilkins, Boston University School of Medicine. The afternoon panel on overweight was under the chairmanship of Dr. Andrew C. Ivy, University of Illinois; Dr. L. H. Newburgh, University of Michigan Medical School; Dr. Edward Rose, University of Pennsylvania School of Medicine; Dr. Edward Rynearson, Mayo Clinic, Mayo Foundation Graduate School, University of Minnesota; Dr. Robert H. Williams, University of Washington School of Medicine. Following this panel, a paper on the "Outlook for New Drug Therapy in Geriatrics" was given by Dr. Chauncey D. Leake, Executive vice president and Dean in charge of medical program, University of Texas.

The midday session was given over to an inspection of the extremely complete research laboratories and manufacturing division. Immediately following lunch a demonstration was given of the use of television in medical education. Following introductory remarks by Dr. Morris Fishbein, methods of evaluating central stimulent, vasoconstrictor and anti-epileptic drugs were televised from the research laboratories to the meeting.

The day's activities were climaxed by a dinner at the Warwick Hotel. Smith, Kline & French Laboratories President C. Mahlon Kline as toastmaster introduced as speakers Francis Boyer, executive vice president, Dr. A. Newton Richards, Harold E. Stassen, and Dr. Morris Fishbein.

The modern new $7,000,000 building of Smith, Kline and French Laboratories at 1530 Spring Garden St., Philadelphia. The building houses research laboratories, manufacturing facilities and general offices.



Winthrop Community Relations Plan

A new program of community relations, which accents the professions, has been launched by Winthrop-Stearns Inc., to acquaint members of neighboring medical, dental and pharmaceutical societies with the company's manufacturing and research facilities at Rensselaer, N. Y.

Sixty doctors, members of the Schenectady County Medical Society, were guests of the first of six open house visits scheduled for 1949.

Presided over by Dr. Theodore G. Klumpp, president of the company, the open house involved a tour of the plant, dinner and a scientific seminar. Dr. A. E. Sherndal, vice president in charge of manufacturing, explained the problems of transferring a new product from the research laboratory to commercial manufacture.

As part of the scientific discussion, Dr. A. M. Landis, in charge of pharmacodynamics research at the Sterling-Winthrop Research Institute, spoke on "Isuprel and Other New Drugs in the Treatment of Asthma," and Dr. Charles F. Kade, Jr., in charge of nutritional research talked on "Protein Hydrolysates."

C.C.A. Elections

The officers of the Commercial Chemical Association for the 1949-50 operating year have been announced. The new president is C. D. Goodale, Commercial Solvents Corporation, Terre Haute, Ind.; Vice president, F. A. Soderberg, General Dyestuff Corporation, New York; Treasurer, C. W. Walton, Minnesota Mining & Manufacturing Company, St. Paul, Minn.; Executive secretary, G. O. Cragwell, Chas. Pfizer & Company, Inc., Brooklyn, N. Y. New directors are: J. H. Boyd, consultant, New York; John B. Calkin, director of the Department of Industrial Cooperation, University of Maine; A. G. Fisher, Jr., U. S. Industrial Chemicals Company, Inc., and W. B. Plummer, Indoil Chemical Company, Chicago.

Ivers-Lee Report

Lloyd I. Volckening, president of Ivers-Lee Company in the annual report announced that the mechanical requirements for the foregin Ivers-Lee associate companies have been practically completed in 1948 and the capacity of the Machine Manufacturing division is now being devoted to increasing the facilities of the contract packaging department.

In his report Mr. Volckening, made known the advancement of M. J. Salfisberg and J. R. O'Meara to divisional sales managers, and the appointment of Robert J. Miller as resident regional manager for the Western territory with headquarters in San Francisco.

Three others have been added to the sales staff, they are: James P. Measday, Dayton R. Males and William G. Ingram.

John Roosevelt Heads Spray-A-Wave

John A. Roosevelt, the youngest son of the late President of the U. S., has been appointed president of the Spray-a-Wave Company, a subsidiary of the Lee Pharmacal Company.

Mr. Roosevelt will start his new post with a tour of the country, visiting regional offices and distributors. Following his graduation from the Harvard Business School Mr. Roosevelt began his merchandising career with Filene's in Boston. Later he entered the Navy and upon his discharge with the rank of Lt. Commander, he became West Coast manager of an apparel chain. Last year, he opened the Roosevelt-Good department store in Beverly Hills. He will retain his association with this firm.

Wants American Imports

Vinant Ltd., 200 Vallee St., Montreal, Canada, is interested in importing or manufacturing under license in Canada pharmaceutical specialties and perfumes. Those companies interested should write G. P. Vinant at the above address for more complete information.

Speaker at ADCIM

Ellis D. Verink, Jr., of the Aluminum Company of America, was the guest speaker April 6, at the monthly meeting, of The Associated Drug & Chemical Industries of Missouri. Mr. Verink spoke on the "Use of Aluminum Processing Equipment in Chemical and Pharmaceutical Manufacturing."

Mr. Verink has been associated with the Aluminum Company of America since February 1946. He joined it after five years service with the U. S. Navy.

Heads Catholic Charity Section

William F. Murtha, Bloomingdale Brothers, Inc., New York, has been named chairman of the Drug and Cosmetic section for the Cardinal's Committee of the Laity in its annual drive for Catholic Charities.

Proom with Wallace Box Corp.

Robert W. Proom has joined The Wallace Paper Box Corporation, 609 W. 51 St., New York, and will represent the firm in a sales capacity.

Bush Named as Rep. for French House

Bush Aromatics Inc., 136 Liberty St., New York, has been named representatives of Laboratoires Synarome, of Asnieres (Seine) France, in this country.

Herbert H. Harris

Herbert H. Harris, president of Parfums Charbert, Inc., died March 21, in the New York Hospital. He was fifty-two.

Mr. Harris, as president of one of the largest perfume companies in the country, helped launch many nationally known products. He was also a director of the Toilet Goods Association.

Mr. Harris was born in New York, attended De Witt Clinton High School and New York University. In World War I he won a battle field commission as a first lieutenant in France.

Along with his work in the perfume field he was very interested in the theater. He produced such hits as "Connecticut Yankee," "Hit the Deck" and more recently "All My Sons."

Surviving are his wife, three brothers and four sisters.

Dr. Reclaire

Dr. A. Reclaire managing director of Polak & Schwarz, Inc., Hilversum, Holland, died March 1.

Dr. Reclaire was born in 1891 and joined Polak & Schwarz in 1919. He has been the managing director of the Hilversum plant for twenty years.

Howell Foster

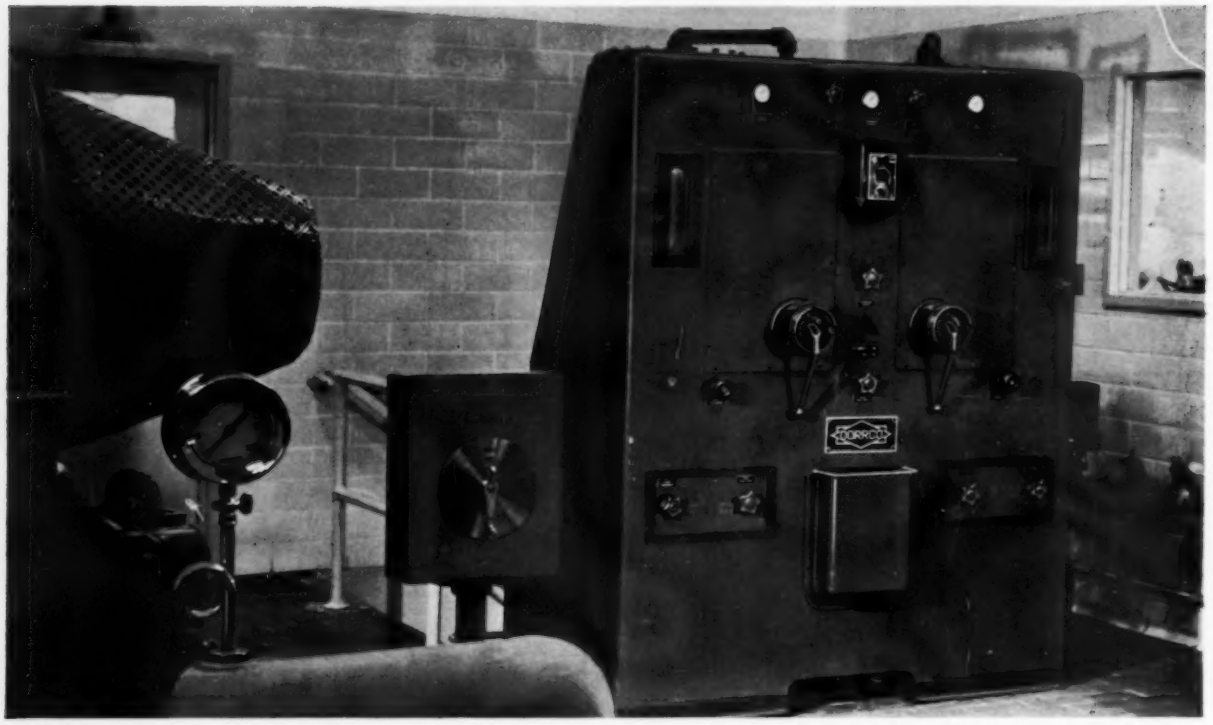
Howell Foster, retired vice president and director of Schieffelin & Company, New York, died March 17 at his home in Cross River, N. Y. He was eighty-four years old. Mr. Foster had joined the Schieffelin organization in 1882 as an order copyist.

John R. Ferrell

John R. Ferrell, chemist and salesman for Seeley & Co. (Canada), Ltd., died March 11 at his home in Toronto. He was fifty-eight years old. Mr Ferrell had headed his own essential oils and extracts business before joining the Seeley organization several years ago.

A report on the use of Dorrco D-I water in pharmaceutical manufacture.

at ORTHO PHARMACEUTICAL CORPORATION



d-i water

✓ IMPROVES PRODUCTS

✓ REDUCES COSTS

✓ SIMPLIFIES CONTROL

The Dorrco D-I System shown above was installed three years ago for the production of demineralized water for pharmaceutical manufacture. Total operating expense has averaged *42 cents per 1,000 gallons of deionized water* produced. No resin replacements have been required . . . and the unit has performed *exactly* as specified when sold.

At Ortho, D-I water has reduced costs when substituted for distilled water . . . has improved product quality and simplified control by eliminating the variable of fluctuating quality in water supply.

This is but one case where D-I water is paying off on many counts. Regardless of industry, if your process requires water free of dissolved solids, the Dorrco D-I System will produce it . . . in any amount . . . at a fraction of the cost of distillation.

Write for Bulletin #4081 for complete details.

DORRCO

THE DORR COMPANY, ENGINEERS
570 LEXINGTON AVE., NEW YORK 22, N. Y.
ATLANTA • TORONTO • CHICAGO
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DORR

RESEARCH ENGINEERING EQUIPMENT

Production Forum

By FRANCIS CHILSON
Industrial Consultant

Health Insurance

I suppose you've all read the American Druggist debate between Ewing and Morris Fishbein of the A.M.A. I don't know what you thought of it, but for my money Ewing won, hands down. Ewing stuck strictly to the popular line and Morris stuck to the professional lobbyist's line, evading and parrying like the clever debater he is, and making at least one misstatement, which if used again as an argument against national health insurance, will do irreparable harm to the cause of American medicine. I refer to his statement that, as a result of socialized medicine, the English have become a nation of hypochrondriacs. That such a thing could happen in less than a year is obviously untrue and ridiculous; that it will ever happen is doubtful. The availability of free medicine may cause hypochrondriacs to go to doctors more frequently than they do now, but it is doubtful if it will create more of them. Anyway such a thing couldn't happen in the short time socialized medicine has been practiced.

It hasn't happened in New Zealand where they've had socialized medicine for several years. This statement can be made on the authority of Australian friends, who are in both the ethical and proprietary drug business in New Zealand, and who have lived long enough with socialized medicine to know the score.

I think the first thing the A.M.A. has to do to carry on the fight effectively is to unload Morris Fishbein as its chief protagonist. If this great fight is to be won it will not be won by high pressure insistence that the government is entirely wrong, that there is nothing wrong with American medicine and that the A.M.A. and Morris Fishbein are always right. I know many members of the A.M.A. who do not think Morris Fishbein always has been right; that the A.M.A. has always been right or that there is nothing wrong with the practice of medicine in this country. The Brooklyn Academy of Medicine apparently doesn't feel that the Fishbein approach is entirely right or it would not have had a meeting protesting the assessment, which was levied against all A.M.A. members, to f'ght the national health insurance program.

If you, who are in the ethical end of the drug business, think you will escape a heavy handed touch in due course, to replenish A.M.A. coffers, I think you are certainly optimistic. Morris has ways of gently applying persuasive pressure. Before this is over, you proprietary fellows may feel the clip too. It certainly will be ironical to see Morris Fishbein sleeping in the same bed with the proprietary people. But wait until the slush fund begins to run low! I would'nt be surprised to learn in due course that the A.M.A. doesn't think Lydia Pinkham's and Grove Bromo Quinine Tablets are so bad after all!

Most of the doctors I have talked to are convinced that the apparent line of attack of the A.M.A. will lead to disaster. They seem to feel, as I do, the only constructive approach is to acknowledge the deficiencies of American medical practice and offer an alternative plan, which would enable the government to spend its money where it is badly needed without generally regimenting the practice of medicine.

Because I have written so much on the subject, you may feel I am unduly exercised about the proposed legislation. I am. I think every citizen should be. In my case I have a financial stake in the drug industry. As a citizen and as a parent I would like to feel assured of getting adequate specialized medical care at a fair price and I should like to feel that when my children are on their own a few years hence, they will be able to afford it too. Among other things I'd like to see further, expensive specialization in medicine restricted and this, the A.M.A. can do. Time was when a physician felt he had to be in practice for ten years before he knew enough medicine to specialize. Now almost every interne who is'nt yet dry behind the ears is planning to specialize as soon as he gets out. If you think this is exaggerated stop in at the first hospital you come to

and talk with a few of the internes. When they eventually set themselves up, they fall a prey to the equipment salesmen and buy with borrowed funds a lot of expensive apparatus, in order to pay for which they charge exhorbitant fees. Here's a typical example. Similar things have happened to me and undoubtedly to you or your own family:—

I had a secretary once who developed a kidney infection. Her doctor diagnosed the case as one requiring surgery. He sent her to a smart young specialist, who promptly insisted on a lot of preliminary tests and x-ray photographs. Then he operated. His bill was $500. The girl's doctor, who had made a correct diagnosis in the first place and who cared for her before and after the operation, billed her $30. X-ray plates and laboratory fees were $132. Hospital bill $178. Her own doctor raised hell with the specialist when he discovered how much the girl had been soaked and the specialist grudgingly knocked off only $50. His equipment had to be paid for of course and since specialists have fewer patients than other doctors, they are entitled to higher fees. But not that high. This was rubbing it in on a girl who had to support herself and her mother on a salary of $50 a week. This is only a mild case of overcharging. When people hear of cases like this or experience them themselves, they believe all doctors are a bunch of bandits and they will support any measure which the government sponsors to reduce the cost of medical care. It's a sort of revenge.

The Communists

Capitalism is everywhere under attack and a red stain slowly flows across the face of the earth. Capitalism is everywhere on the defensive and its feeble, protesting voice is overwhelmed in clamor of the disgruntled, the disinherited and the downtrodden. When intelligent educated men, like Whitaker Chambers, Alger Hiss and the numerous university professors, whose names appear from time to time in the news, who have been nurtured under the capitalist system, openly avow their present or past sponsorship of communism, there is something fundamentally wrong, either with the system or the manner in which its protagonists proselyte its manifest benefits. I do not think there is anything fundamentally wrong with the system, which could not be converted, but there is a lot wrong with the people who benefit most from that system. One of the constantly recurring themes of communist propaganda is the inordinate selfishness of all capitalists. And, we who live by capitalism, continually provide fresh amunition for our enemies. We believe communism should be fought tooth and nail so long as somebody else takes the time to do the fighting, while each of us is left alone to look after his own affairs. In such an attitude alone, we provide evidence of what the commies call the innate selfishnesses of capitalism.

Collective defense alone will not stem the spreading tide of communism. It's an individual problem—your's and mine. Now is the time to demonstrate that individualism need not be crassly selfish. Every time we as individuals or economic entities commit an act that is unfair, selfish and morally questionable, we stab capitalism in the back. Some of you will get your hackles up and point to what we are giving away in the ERP program; you can cite a whole bookful of capitalist philanthropies here and abroad. But what are you personally doing? That's what counts. Here are some of the typical stabs which capitalism gets from its own adherents:

When the milk companies added one and two cents a quart to the price of milk when they started homogenizing it, they were guilty of a selfish, unprincipled gouge because the process of homogenization added—if anything—only an infinitesimal fraction of a mill per quart to the cost of processing milk. As a fatter of fact, since homogenization enables the processors to hold the cream content of milk right at the legal minimum, the chances are the homogenization process actually reduced the cost of the finished product. Homogenized milk could have been sold at no increase in price and the milk companies could have advertised the fact as evidence of what capitalist enterprise does for the public.

You've read recently about G.E.'s effort to monopolize the fluorescent lamp market? What's that but evidence of unwarranted selfishness beyond the bounds of business prudence and profit necessities. Do you think the commies miss opportunities to capitalize such incidents? Read their literature. When you are in New York sometime stop at Union Square and listen to their spellbinders haranguing workers at noon time.

Let's cite a case close at home. A friend of mine, who has been with his company twenty-five years, was made divisional sales manager for his outfit. Before he had the job long enough to show what he could do, he was forced out on the pretext that his impaired hearing would make it impossible for him to carry on the company's program. The company knew his hearing was impaired. They also knew his hearing had been impaired in World War I in an exploit for which he received the Congressional Medal. It seems to me the man, perhaps, should not have been appointed in the first place, but having been appointed, his chair should not have been so ruthlessly kicked from under him before he got firmly seated in it.

Stories like this get around and the commies make capital of them. Every management should realize that every time one of their employees gets a raw, unfair or dirty deal they are providing ammunition for the enemy; they are creating recruits for his insidious armies.

Your defense against communism begins at home. Your employee relations program should have as its basic tenet, the creation invincible defenders of capitalism. Every decision affecting employees should be carefully weighed in the light, not merely of the way it will affect their loyalty to their own Company, but also

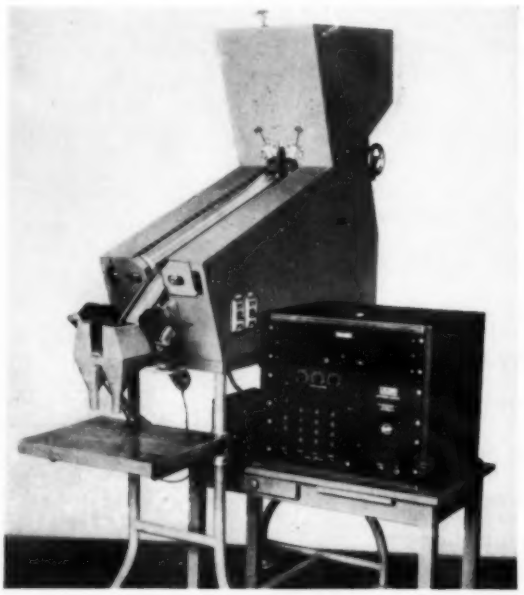
in the light of the way it will affect their attitude to the system which makes your business and their jobs possible.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Features of "Count-O-Matic"

Versatility. This machine will handle the complete range of pharmaceutical products—all shapes and sizes of pills, capsules, tablets, etc.

Quick Change-Over. Change-over from one size or product to another is accomplished in less than 5 minutes time.



Accuracy. Complete accuracy of count is claimed due to the fact that each object is individually counted by the electronic instrument.

High Production Rate. Production rates for average sizes and shapes range between 2,000 and 3,000 pieces per minute. Rates up to 6,000 pieces per minute are obtained for small pills and tablets.

Dust & Chip Elimination. Dust and chips are eliminated through spaces between the rollers and will not enter the bottle.

Smallest Bottle Opening. The funnel will not jam up due to small bottle openings since pills are fed in a continuous stream ONE AT A TIME.

Ease of Cleaning. The machine is open and accessible. Wipe out the hopper and run a damp or dry rag along rollers while machine is running to clean. All parts in contact with product are made of monel or are hard chromium plated. A felt wiper keeps the feed rollers clean and free of dust while the machine is in operation.

Simplicity & Ruggedness. Simplicity of design and sturdyness of parts make for a long trouble free life.

Write. U. S. Engineering Co., 140 Nassau St., N. Y. City 7, N. Y.

New Yale Scale

A new type of weight printer is now being offered as an integral part of Yale Load King Industrial Scales. It eliminates the uncertainty of the lead pencil and human element by printing actual weights in numerals 9132" high, without additional printing or mental calculation. The various weights in a series can be identified by printing opposite the recorded weight from one to eight symbols, numerals or letters. Therefore, more accurate data becomes available for inventory control, shipping records, production records, wage incentives, etc.

Other features include: (1) elimination of a slow-dragging or floating pointer action; (2) hinged selector fingers which prevent damage to the selector fingers or printing disc mechanism should the printer be operated while a load is being moved on the scale; (3) printing beyond the full capacity of the dial in the event of careless or accidental operation of the printer with the pointer beyond the last graduation; (4) automatic reversing of the ink printing ribbon by means of an Alnico magnet; and (5) a continuous-duty electric motor which assures uninterrupted operation.

Heretofore, when using a unit weight cabinet (where weights are sometimes added to the scale lever system to increase the weighing capacity of the scale as indicated by the dial) it was necessary to add several weights on the ticket or tape to arrive at the total weight. Here, the total weight is printed directly.

The Yale weight printer can be adjusted to take tickets from 3" x 5" up to 8½" x 11" with one to four copies. All copies, including the original, are carbon backed and of regular weight. Other combinations include: a ticket printer with a single tape printer (tape either winds up inside machine or ejects from the side of the printer case); inserted ticket printer with two rolls of tape, (one tape winds up inside the machine and the other ejects out the side of the printer case); a single tape printer; a combination of a double tape printer with one tape winding up inside the machine and one tape ejecting out the side of the printer case.

The printer is actuated by a depressing bar directly beneath the ticket slot. It makes an electrical connection actuating a small electric motor, which drives a series of gears and cams causing the selector fingers to reach in and position themselves on the notched discs on the back of the pointer shaft. After the selector fingers have positioned themselves, a solenoid is actuated, causing a rubber platen to press the inked ribbon against the sectors carrying the type which makes an impression of the weight.

The standard printer operates on 110-volt, 60-cycle, single-phase, AC current. However, it can be furnished

Announcement by Colton

THE goodwill, patents, inventory and certain assets of the Arthur Colton Company have been purchased by Snyder Tool & Engineering Company of Detroit which will operate the Colton Company as a subsidiary under the Colton name.

Operation will be transferred to the large, new Snyder plant where there is every modern facility for building fine machines for many fields of manufacturing and packaging.

Administration will be in the hands of an executive combination merging the specialized experience of the engineering, sales and manufacturing departments of the 65-year-old Colton Company with that of the 25-year-old Snyder Company in order to provide a service of outstanding worth to Colton clients throughout the world.

ARTHUR COLTON COMPANY

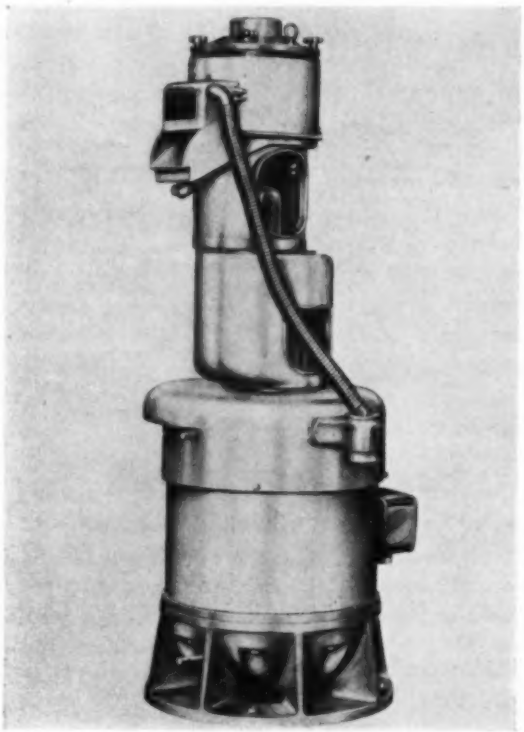
DETROIT, MICHIGAN

for operation on other currents on special request. Further information regarding this printer may be obtained from The Yale & Towne Manufacturing Company, Philadelphia Division, Philadelphia, Pennsylvania.

New Morehouse Mill

Designed for grinding, mixing, dispersing, disintegrating, homogenizing and emulsifying, and with a capacity of over 500 gallons per hour, proved in actual plant operations, Morehouse Speedline Mill No. SB2000 is the latest addition to the Morehouse line of high capacity grinding and mixing equipment, according to Morehouse officials.

Suitable for a wide variety of materials, both wet and dry, the new unit is 5'9" high, 24" in diameter



and weighs approximately 1433 lbs. It may be placed anywhere desired in the plant, as no special base or mounting is required. The only electrical connection necessary is a simple socket plug-in.

Morehouse Speedline Mill SB2000 is available with 40 H.P., 50/60 cycle 220/440 Volts, A.C. explosion-proof Class 1 Group D motor. Other types of motors can be supplied if specified. It is also supplied with non-explosion-proof motors at less cost. Special electrical specifications are available on request.

Announced as the "world's fastest mill," its 500 gallon-per-hour capacity and high quality production are due to the Morehouse grinding principle based on use of high speed grinding stones and vertical design. Grind size may be adjusted without stopping. All parts are interchangeable. Take down for cleaning between runs or changeover for different material requires only a few minutes.

Full details are available by writing the manufacturer, Morehouse Industries, Inc., originators and sole manufacturers of Morehouse Speedline Equipment, 1156 San Fernando Road, Los Angeles 31, Calif.

Yale Gas Truck

Coincident with the opening of its new 16-acre plant on Roosevelt Boulevard opposite Northeast Airport in Philadelphia, The Yale & Towne Manufacturing Co., Philadelphia Division, announced for the first time in its 80-year history of manufacturing materials handling equipment the production of gasoline-powered industrial trucks. The new line, to be known as the "Lift King"gas truck line will feature fluid drive, automotive controls, hydraulic piston lift (in two stages by means of a ram-within-a-ram), and low-mast heights with high free lifts.

Recognizing the advantages of the gas truck in certain types of applications, Yale, with this move, is expanding its over-all market and strongly supplementing its electric truck lines. The Philadelphia Division of Yale & Towne has long been noted for its complete range of hoists, hand trucks, electric trucks, motorized hand trucks, and industrial dial scales.

The Lift King gas truck is equipped with standard Chrysler fluid drive, a new wrinkle in gas truck design. The fluid coupling outmodes mechanical couplings and permits the operator to progress from slow to fast speeds, and vice versa, without operating clutch or gearshift levers. This feature eliminates wear on mechanical parts and reduces operator fatigue. Tire life should be improved.

The hydraulic lift is actuated by an exclusive ram within a ram which gives two stages of elevation. The elevating fork carriage rides on heavy duty thrust roller bearings, eliminating the power losses which result when elevating channels slide on stationary channels. All hydraulic connections are placed to prevent hose lines from dangling from the elevated mast.

The many loading, clamping, rotating and fork-adjusting accessories which characterize modern truck adaptations to special handling functions for special industries, all operate hydraulically—a convenient arrangement with Yale's new lifting system.

The hydraulic lift is constructed to permit a full 66" load-lift before the telescopic mechanism begins to rise. This feature is a valuable asset in loading railcars, street trucks, and low headroom spaces. This same model has a maximum lifting height of 130", can handle up to 6,000 lb. loads and has a collapsed height of 83".

A second model is available with a free lift of 51", a maximum lifting height of 100" and collapsed height of 68". This collapsed height, only eye-level to a six-footer, is in line with current interest in entering low doorways with husky loads.

One of the special virtues of the new Yale Lift King

gas truck line is high lifting speeds, of 30 feet per minute at full load. In warehouse-tiering and heavy-schedule operation this "extra" means many production-dollars.

Drum Pump

This efficient, self-priming drum Pump for alcohols, paint thinners, light oils and other volatile liquids is equipped with a positive shut-off valve that is absolute protection against evaporation losses. Its maximum capacity is 15 gallons per minute.

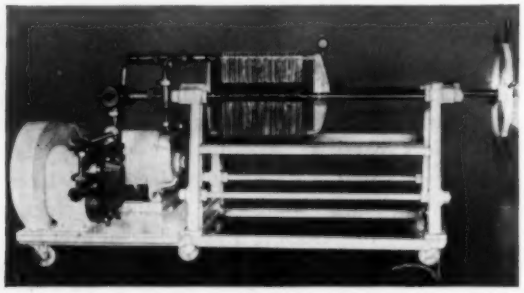
The No. 750 pump has no pistons, rings or leathers; no rotating parts to stick or wear. The special diaphram is a heavy cord-fabric vulcanized between synthetics. It does not dry out, swell up, rust or corrode and is unaffected by petroleum products, alcohol and most other fluids.

A handy fill-spout makes it easy to fill measuring cans and containers. All waste is prevented by an automatic drain back which completely drains hose and pump when handle is lifted. A locking link, near the middle of the handle, can be used to prevent use of pump by unauthorized persons.

The No. 750 pump, sturdy and trouble-proof, is economically priced at only $10.75. Write for complete data or order direct from the General Scientific Equipment Company, 2700 W. Huntingdon Street, Philadelphia 32, Pa.

New Ertel Filter

Ertel Engineering Corporation, Kingston, New York announces the development of a new unit where all



parts coming in contact with the liquid are stainless steel. The unit incorporates a sanitary stainless steel pump and is equipped with stainless steel sanitary fittings. Sight glass allows view of liquid clarity.

Closing of the EUS Model is effected by the single Ertel effortless handwheel. A stainless steel drip pan is provided to save valuable liquids. Pressure guage indicates working pressure at all times and pressure relief valve is standard equipment for complete safety. This filter is built in sizes to accommodate from 10 to 100 Ertel low iron and calcium asbestos filter sheets, filter paper or filter cloth.

Capacity from 5 to 30 gpm. Easy mobility is assured by six casters. The combination of polished stainless steel and white enamel make this filter highly adaptable to installation in all sanitary production lines.

New Stokes Pilot Plant

The F. J. Stokes Machine Company, Philadelphia, Pa., announce the new Stokes Model 214-A, 2′ diameter by 2′ face dryer, especially designed for pilot plant use in food and chemical processing plants, laboratories, etc.

Extremely flexible, the Stokes Model No. 214-A Dryer and Flaker can be used as a double drum dryer or a double drum flaker, or as a single drum dryer or flaker by merely separating the drums and rotating only one. It can also be used as a twin drum dryer or flaker by rotating the drums in the opposite direction and feeding from below. Complete instrumentation permits exact recording of data and control of all variables while making tests.

Furnished with two sets of drums, stamped in accordance with the ASME code for 160 p.s.i. maximum steam working pressure, the drums are available in a wide variety of metals. Drums can be either heated with steam or by other suitable heating mediums, or cooled with water for flaking or chilling.

Drum drive has a 24:1 speed range, with drive reversible for use with all types of feeds. A drum speed indicator, the first ever installed on a drum dryer, eliminates the use of stop watch for every change in RPM. Drums can be separated for single drum operation through controllable wrenches on outside of end frames. Instruments clearly indicate drum clearances in thousandths of an inch. An automatic mechanism instantly increases the clearance between drums, to prevent surface damage from the entry of hard lumps or foreign objects.

The New Stokes Pilot Plant Dryer and Flaker is designed for operation with all commercially practical types of feed, including top (valley), drip, splash and spray. All commercially practical types of knives can be used including flexible and rigid. Conveniently located hand wheels operate knife pressure and knife angle adjustments. Adjustable end scrapers for maximum efficiency are provided for cleaning ends of drums.

Open top stainless steel collection boxes collect dried or chilled material from the doctor blade. Where desired, screw conveyors can be supplied. Total enclosures with suitable doors and windows can be furnished where toxic or inflammable materials are involved.

The New Stokes Model 214-A Dryer and Flaker instrument panel includes control and indicating recorders for drum steam pressure, power consumption and drum speed for drying operations; cooling water inlet and cooling water outlet temperatures and cooling water flow rate for chilling or flaking operation; and drum drive motor control, feed pump control, vapor hood exhauster motor control, and drum steam pressure regulator.

Detailed data on this versatile dryer and flaker will be sent when requested by the F. J. Stokes Machine Company, 5932 Tabor Road, Philadelphia 20, Pa.

Cut Costs of Packaging

POWDERED and GRANULAR MATERIALS

Clean, Fast, Accurate

The dust collector hoods and drip-free shut-off gates at the filling stations of the Model JN insure clean operation. Its fully automatic features provide filling speeds up to 120 containers per minute. And it is built for accuracy — maintains the closest possible commercial tolerances — can be quickly adjusted by the simple turn of a knob to control weight variations due to change in product density.

With a Fully Automatic Model JN Packer, Filler, Packer-Weigher

Used as a Volume Packer, or Volume Filler, or Packer-Weigher, the fully automatic, four station Model JN fulfills every advanced requirement in the handling of a variety of packaging problems — will operate on most types of dry powdered or granular materials, using round, square, rectangular or irregular containers with equal facility.

Entering the machine in single line, containers are automatically separated into two lines progressively and, after being filled, are re-grouped into a single line for hand or automatic closure.

The Model JN may be equipped to fill at all four stations if reasonable weight variations are permissible; otherwise, containers are bulk filled at first two stations and accurately weighed at the last two stations.

Once it is put into operation, the fully automatic features of a Model JN Filling Machine plus its speed, accuracy and clean operation quickly return the machine's purchase price through savings in labor costs alone.

It will pay you to get full details concerning how the fully automatic Model JN can cut your packaging costs. Write today.

US

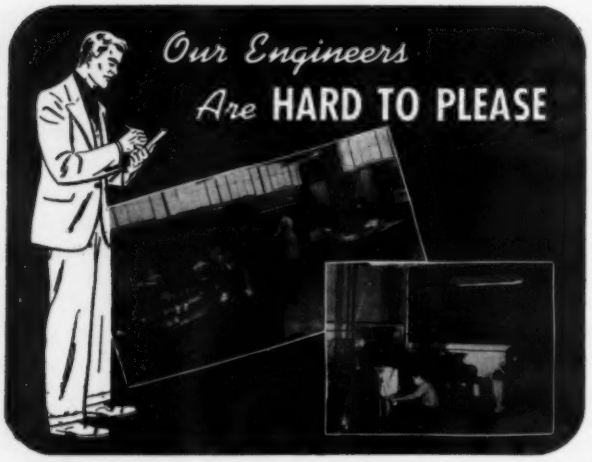
NET & GROSS WEIGHING ★ PACKAGE FORMING & FILLING ★ CARTON SEALING, LINING, WRAPPING ★ BOX MAKING

AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. ★ CARTONING MACHINERY CORP.

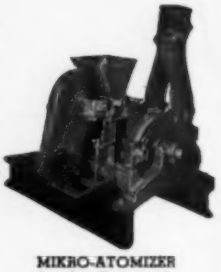
45 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago ★ Los Angeles (Krugh Equipment & Supply Co.)



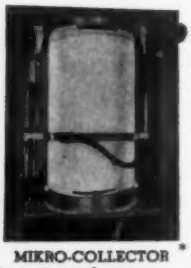
From start to finish . . . . from basic laboratory research to the smooth functioning of a machine fashioned specifically for your individual needs . . . . our technicians work tirelessly to lick your pulverizing and dust collection problems and to see that they stay licked.

They are steeped in a tradition nurtured by a quarter century of service which rejects the phrase "good enough." They are schooled in the philosophy of constructive dissatisfaction . . . . trained never to "let go" until they have given you a MIKRO-PULVERIZER, or a MIKRO-ATOMIZER, or a MIKRO-COLLECTOR insuring the last word in the quality of your product and the very last pound in your potential volume.



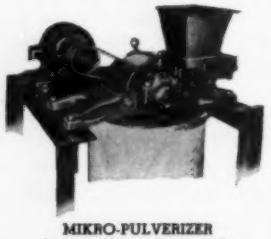
MIKRO-ATOMIZER
for ultra-fine grinds

Or, they will tell you frankly if their preliminary studies, checked against the data gleaned from 55,000 tests already made in our Laboratory, prove that our equipment is not adaptable to your use. They are never permitted to forget that our company built its worldwide reputation on the intensely practical consideration that its own profits will always ascend to the level of its ability to increase yours.



MIKRO-COLLECTOR
for optimum dust recovery

It costs you nothing to sample the thoroughness of these efforts in your behalf. Simply send today for your copy of our Confidential Test Grinding Data Sheet.



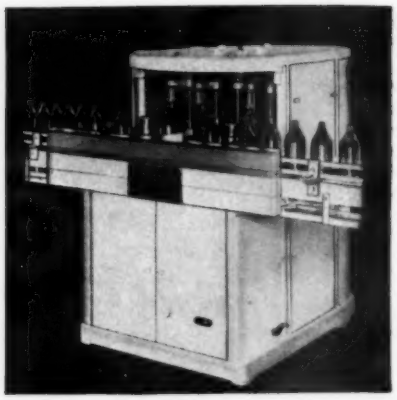
MIKRO-PULVERIZER
for granular or fine grinds

***Patent applied for by H. J. Hersey, Jr. and Pulverizing Machinery Company**

PULVERIZING MACHINERY COMPANY
22 CHATHAM ROAD • SUMMIT, N. J.

MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE)
Reg. U. S. Pat. Off.
Also Makers of the MIKRO-COLLECTOR

FOR CLEANING CONTAINERS BY COMPRESSED AIR

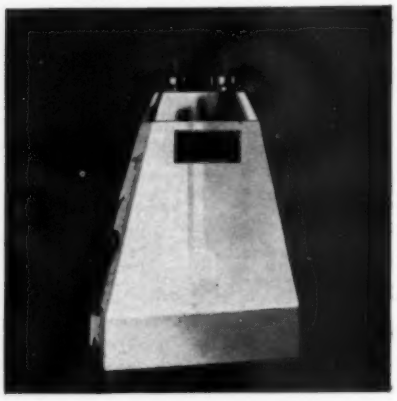


Automatic

The U. S. Sanitair air-cleans up to 130 containers per minute and may be synchronized into any production line.

Two complete revolutions of every container for each revolution of the machine provide double cleaning time at normal operating speeds . . . in half the usually needed working space. Produces the most thorough cleaning action and insures the most economical use of compressed air. Foreign matter air-forced from containers is collected in easily removable bag.

Handles all sizes of containers from AGST bottles to wide mouth containers . . . requiring only a ten-minute adjustment for change from one container size to another. Our "Sanitair Bulletin" describes all details; write for it today.



Semi-Automatic

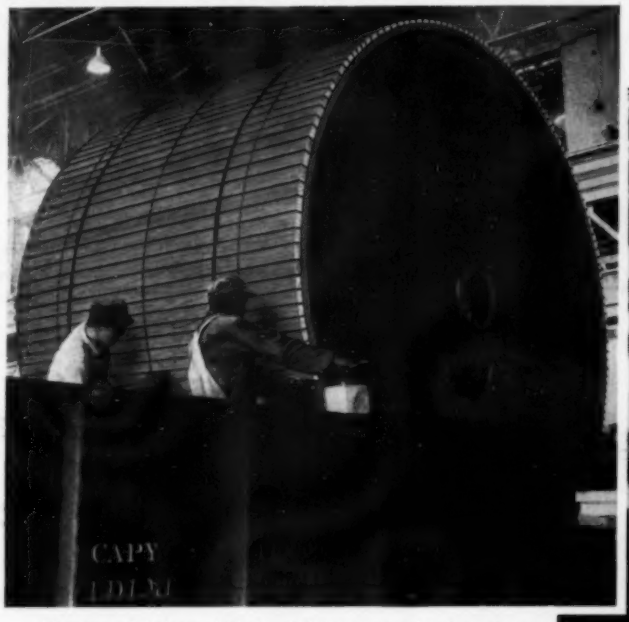
The E- Z Two-Tube Air Cleaner for cleaning new glass, is automatic in operation except for manual placing and removing of containers.

As a two-tube machine it handles two containers at a time. The instant the inverted container contacts the machine, a blast of compressed air efficiently removes all foreign matter from the container. Requires no skill for efficient operation.

Furnished with air filter ready for connection to customer's air lines. Portable, equipped with cord and plug for attaching to electric circuit. Floor space required only 27 x 14 inches. Write for Model E- Z Bulletin.

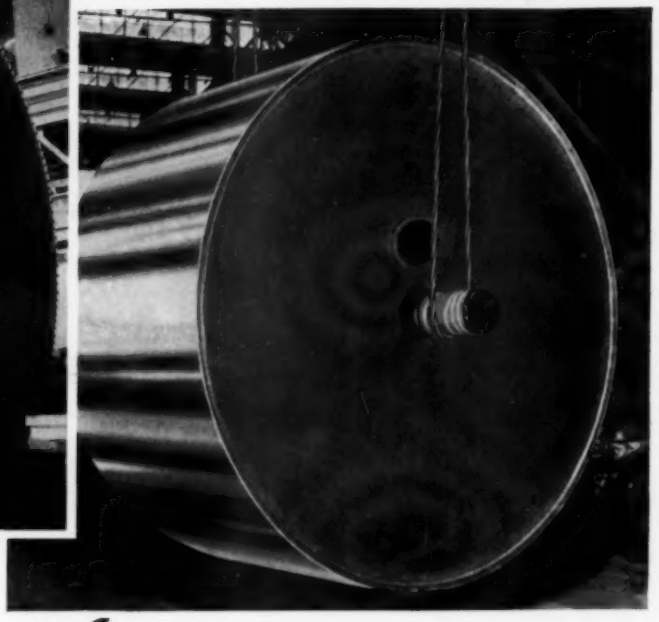
U. S. BOTTLERS' MACHINERY CO.
4013 N. Rockwell St. Chicago 18, Ill.

Another LUKENWELD Drier Roll ON ITS WAY TO CHAMPION...



The seventh Lukenweld Drier Roll to go into this important service at Champion Paper and Fibre Company; shipped November, 1948. It is 12 feet in diameter, with an 8'4" face.

The first of these Lukenweld Drier Rolls was shipped to Champion, 12 years ago.



for a further boost in Kromekote* production

Kromekote's superb printing properties depend upon the uniformity and perfection of this paper's coating. A Lukenweld Drier Roll helped Champion develop the revolutionary methods which gave Kromekote those properties way back in 1937. Six additional Lukenweld Drier Rolls have since been added to take care of the ever-increasing demand.

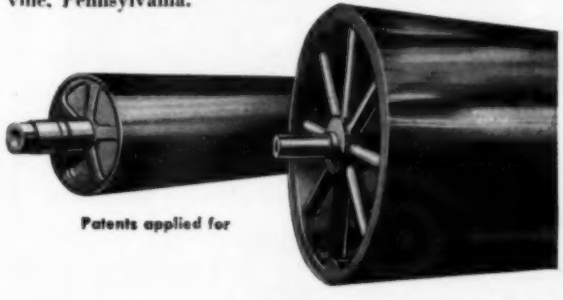
Repeat orders received regularly from the various industries in which Lukenweld Drier Rolls are working —paper, chemical, drug, food, plastic and other industries—are evidence of their worth. Their welded steel plate construction is strong and dependable; high pressures are employed with safety. Simple in construction, there's nothing to get out of order.

Where Lukenweld Drier Rolls have replaced other rolls, production increases of 18% to 35% have been reported. This is accounted for by the positive removal of condensate and higher steam velocities obtained. Heat is transferred to roll faces rapidly and uniformly.

*T. M. Reg. U. S. Pat. Off. for Champion's Cast Coated Paper

If you have a drying problem ... In addition to supplying the drier rolls, Lukenweld will design, build and install the complete drying machine. Our engineers can help you speed up production, cut costs and improve products.

For a copy of Bulletin 358 on Lukenweld Drier Rolls or for other drying help, write Lukenweld, Division of Lukens Steel Company, 482 Lukens Building, Coatesville, Pennsylvania.

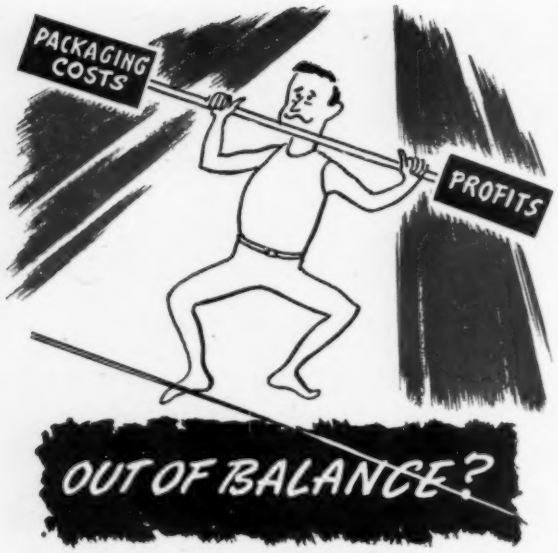


Patents applied for

LUKENS
LUKENWELD DIVISION

DESIGNERS, ENGINEERS AND MANUFACTURERS OF MACHINERY

• • SPEED SCRAP TO THE MILLS TO MAKE MORE STEEL • •



Modern Triangle Packaging Machinery Is the Answer

YOU have to put your product in a package, but the method you use to put it there can make a whale of a difference in your profit and loss statement. Studies by Triangle show that 3 out of 4 packaging departments are wasteful, inefficient profit-robbers. Many plants are not familiar with the opportunities to reduce packaging costs with modern, labor saving, space saving packaging machinery. Triangle users regularly report savings of 25% and more.

FOR EXAMPLE: The Triangle Elec-Tri-Pak Weigher illustrated reduced packaging costs $12,000 per year for a Chicago food processor. There is less waste, less labor, less floor space, better looking packages and the machine paid for itself in well under a year. It's adding $12,000 a year to this manufacturer's net profits. No plant can afford to overlook opportunities like this.

Write for literature and ASK ABOUT THE TRIANGLE PAY-AS-YOU-PACKAGE PLAN. For complete recommendations, send sample filled package and state production required . . . no obligation.

TRIANGLE PACKAGE MACHINERY CO.

6639 W. DIVERSEY BLVD., CHICAGO 35, ILL.

Sales Offices: San Francisco, Denver, Dallas, Atlanta, New York, Pittsburgh, Boston, Jacksonville. *Branch Factory:* Los Angeles.

QUESTION

how to fill powders ..FAST, CHEAPLY, CLEAN and TIGHT

ANSWER:

"AUGER-VAC"

WHY.. Dust and spillage are a thing of the past! It's the skillful combination of auger *and* vacuum that does the job . . . does it well. The Auger-Vac turns out from 10 to 20 units a minute—each container filled *tight* to the exact amount required. Powdered milk, cocoa—in fact, any powder filling job is an economical and efficient operation—because of Auger-Vac, another fine product of Stokes and Smith.

FOR HIGHER PRODUCTION REQUIREMENTS, AUTOMATIC MACHINES CAN BE SUPPLIED.

STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

(A wholly owned)

Subsidiary of Food Machinery and Chemical Corporation

4912 Summerdale Ave., Philadelphia 24, U. S. A.

BLOW-DOWN CUT 100,000 GALLONS PER DAY AT CATERPILLAR TRACTOR CO.

ionXchange

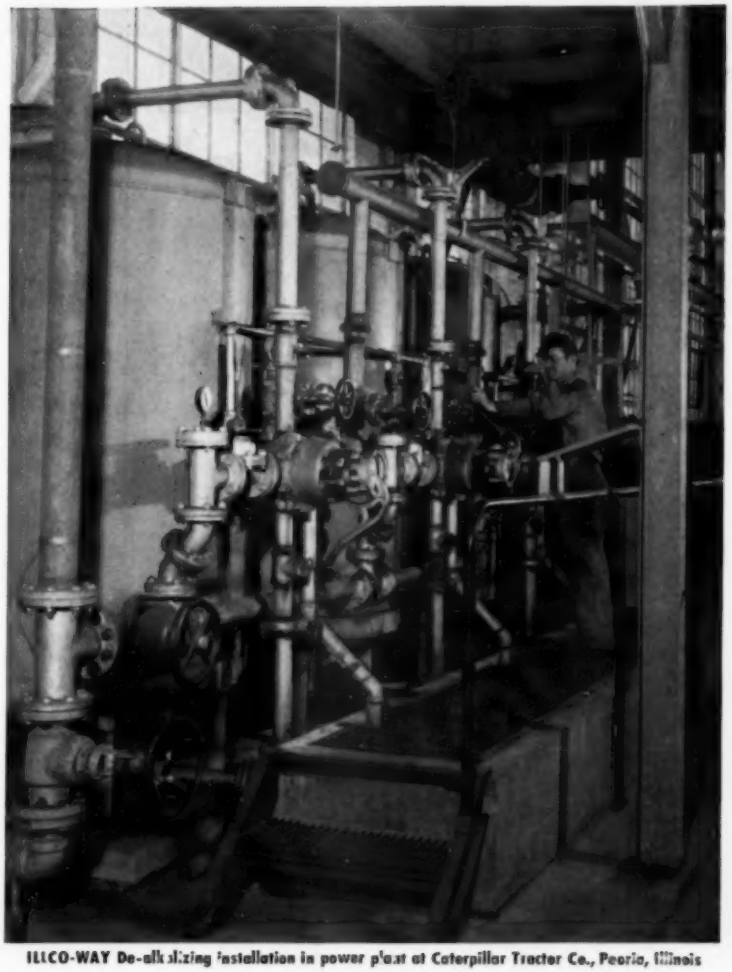
ILLCO-WAY's simplified modern boiler water conditioning system cuts steam costs, boosts efficiency at Caterpillar Tractor Co. plant

"Caterpillar" operates twelve 630 H.P. boilers on de-alkalized water. The boilers can be operated at 200% capacity, or at 1260 H.P.

Use of ILLCO-WAY equipment, shown at right, has reduced blow-downs by approximately one-half of former requirements. Continued use of de-alkalized water is expected to produce even greater blow-down reduction in the future.

In nine months of operation the savings on make-up water have been very pronounced, Caterpillar reports. During normal operations, an estimated 100,000 gallons per day on make-up water are saved by using ILLCO-WAY equipment, as the result of elimination of excessive blow-down.

ILLCO-WAY De-alkalizing equipment produces water suitably low in alkalinity, reduced in solids content, and free of hardness, at a cost comparable to softening. Write for literature today.



ILLCO-WAY De-alkalizing installation in power plant at Caterpillar Tractor Co., Peoria, Illinois

Together to serve you better!

ILLCO-WAY

DE-IONIZING
DE-ALKALIZING
SOFTENING

Elgin

ELGIN WATER CONDITIONING

Services and products of Elgin Softener Corporation have been added to those of ILLCO-WAY—thus broadening our range to include Elgin Zeolite Water Softeners, Water Treating Chemicals, Filters, and the complete line of Elgin Water Conditioning Systems for every need.

ILLINOIS WATER TREATMENT CO., 847-4 Cedar St., Rockford, Illinois • 7310-E4 Empire State Bldg., New York

Illco-Way and Elgin representatives in principal cities

ENGINEERING AND EQUIPMENT—DE-IONIZERS for process water treatment and treatment of liquids and solutions other than water; waste treatment; reclamation of specific constituents. DE-ALKALIZERS: Boiler feed (external); Bottling water. SOFTENERS: Industrial, Domestic. FILTERS, etc.

EPPENBACH HOMO-MIXER MAKES DISPERSIONS WITHOUT INCORPORATING AIR

1. Turbine head near bottom of tank starts a converging horizontal flow which carries sedimentary material into close-fitting rotor vanes.
2. Inflowing "slurry" is violently agitated at high velocity and projected upward toward surface.
3. A submerged baffle-plate deflects the rising current horizontally toward sides of tank, thence flowing downward toward bottom.
4. Rapid down-flow submerges and wets out floating material, including additives being fed into the mix.
5. The entire batch is deflocculated resulting in a perfect dispersion.
6. No surface boil . . . no vortex . . . NO AIR DRAWN IN.

The Eppenbach HOMO-MIXER is built on an entirely new principle. Whereas ordinary mixers create a vortex in the material that pulls in air, the HOMO-MIXER draws only from the bottom of the tank. Entrapped air tends to cause separation and splitting, and frequently oxidizes the product.

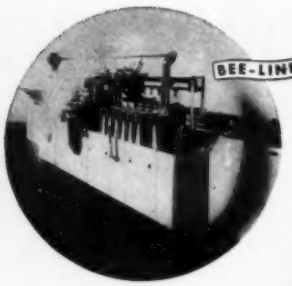
Furthermore, the HOMO-MIXER does not require a high head of liquid to give efficient mixing action. It is possible to process material in a tank at a depth just great enough to cover the mixing head. Fits tanks of all types and shapes . . . no clamps required . . . no special angle of installation.

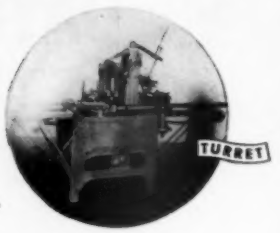
Write for complete details of this mixer—"the only one of its kind." Ask for Catalog No. 402.

Eppenbach HOMO-MIXERS are available in a complete range of sizes for laboratories and production plants. Capacities range from 2 to 2,000 gallon batches from ¼ to 25 H. P.

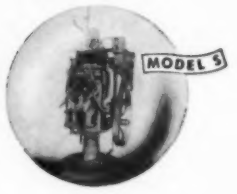
EPPENBACH, INC.
45-10 Vernon Blvd., Long Island City 1, N. Y.

EPPENBACH INC.
Processing Equipment for Over 30 Years





DID YOU KNOW THERE WERE 3 WORLDS?



—and that one of these three is the best Labeler in the WORLD for you

World BEE-LINE is for high production, high quality application of labels to glass packed drugs and cosmetics. It applies all kinds and sizes of labels to all kinds and sizes of glass containers.

World TURRET is for automatic, low cost labeling of a quality worthy of the finest products packed in glass. It handles containers from 2 to 4 ins. diameter, 3 to 13 ins. high. It applies body labels and neck labels, all-around neck wraps or foil, when desired.

World MODEL S is the Semi-Automatic Labeler for applying all kinds of labels to all sizes of containers. Permits rapid change-overs and assures fast operation.

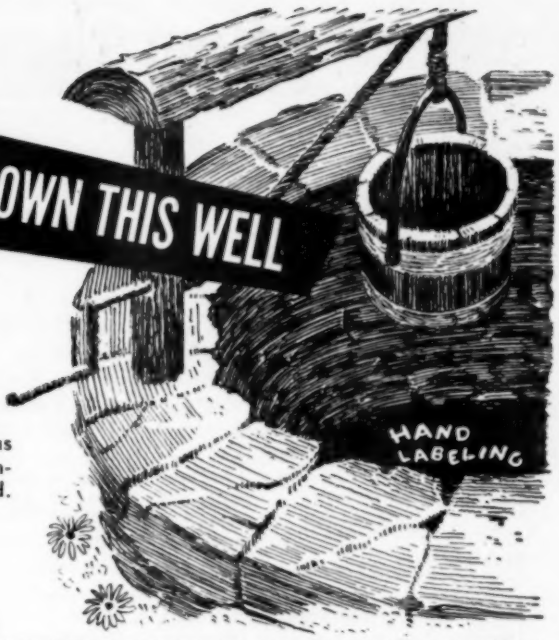
Bulletins on any or all types of Labelers will be mailed you upon request.

WORLD LABELERS

"YOU GET THE BEST LABELERS IN THE WORLD"

ECONOMIC MACHINERY COMPANY
Builders of World Automatic and Semi-Automatic Labelers for Every Purpose
WORCESTER, MASSACHUSETTS

DON'T THROW YOUR MONEY DOWN THIS WELL



Potdevin Labelers are a **one time** investment that will save you time every day, money every pay day. Initial price is low—installation costs nothing—any worker can operate a Potdevin. With daily cleaning and weekly lubrication your Potdevin lasts a lifetime.

And while you're writing for a Labeler—on 10 days free trial—consider a Potdevin Carton Gluer to speed up shipping operations. It's power driven—puts glue on carton flaps as fast as your men can handle them. Saves adhesives by controlling the glue film—applying it only where it's needed.

POTDEVIN

POTDEVIN

MACHINE CO.

1257—38th Street Brooklyn 18, N.Y.

Please send me a Potdevin Labeler on 10 days free trial—and details on Potdevin Carton Gluers.

Name and Title .....

Company .....

Street .....

City ..... Zone ..... State .....

ERTEL CYLINDER TYPE

Positive Seal DISK FILTER

1. FILTERING ELEMENTS are independently tightened to provide positive seal.

2. OUTER CYLINDER is closed by separate handwheel to prevent drippage or evaporation.

★ This multi-purpose filter will operate with a lesser number of sheets than its rated capacity if so desired. Unit is arranged to make reloading and cleaning as easy as possible. Rigidly constructed inlet and outlet rings insure a positive seal and thus eliminate the danger of bypassing unfiltered liquid. Fully illustrated in bulletin ECD-1 which gives complete specifications.

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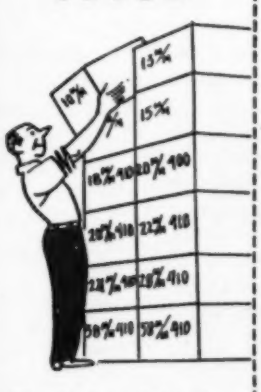

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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

Recent Court Decisions

Two recent court decisions are thought to be of more than passing interest. One of the cases dealt with a patent involving a hair waving method and unit and is of direct concern to the readers of this pub'ication. The other decision is of interest chiefly because it involves a U. S. Supreme Court decision in which a patent was upheld.

Hair Waving Patents Invalidated

In the hair waving case, Reissue Patent 22,660, issued to Evans & McDonough, and U. S. Patent 2,051,063, issued to Winkel, were declared invalid by the Court of Appeals for the Seventh Circuit (which includes Chicago and environs). The two patents involved in this case dealt with the so-called chemical heating hair waving technique, as distinguished from the hair waving methods involving the use of an electrical current to obtain essential heat. The Winkel patent disclosed a permanent waver which does not require any fastening means for maintaing it intact on the hair while the latter is being treated. Winkel provided in a single unit a backing sheet having a sachet secured adjacent one edge thereof. This sachet, of impervious material such as metal foil, contains a chemical such as calcium oxide or an oxide compound intended to be combined with a liquid such as ammonium hydroxide to develop heat sufficient to fix the wave in the hair relatively permanently. Winkel also attached an apron, to be moistened by the aforesaid ammonium hydroxide, and prescribed that, before wrapping the pad around the curled hair, the sachet containing the chemical be perforated. When the pad is then wound around the hair, next to the hair is the apron moistened as aforesaid by the ammonium hydroxide; then around this is wrapped the sachet containing the chemical so that the sachet having been perforated, the moisture from the apron generates the heat necessary to effectuate the desired result. When Winkel has thus wound around the curled hair the apron, the sachet and the outer covering, he fastens the pad by twisting the ends of the outside enveloping metal foil above and below the pad on the curler, thereby eliminating any necessity of a clamp and providing an effective means to prevent the escape of vapors generated by the chemical reaction.

The Court held that there was no patentable invention over the prior art, which consisted of Lackenbach 18,346, Frederics 1,596,247 and Sartory 1,565,509. According to the Court the difference between the Winkel and Sartory patents was that Sartory placed his moistening element outside of the heating element while Winkel placed his inside. While the Court conceded that Winkel improved upon Sartory in certain particulars the Court did not regard the improvements as involving patentable invention.

It is understood that a petition to the U. S. Supreme Court will be made to review the decision of the Court in this case. Also, it is understood that there are suits pending in other circuits and that at least one of these pending suits will be prosecuted to completion. Consequently, the possibility exists that the patents in question may be upheld in a circuit other than the Seventh Circuit in which event it is quite probable that the U. S. Supreme Court will ultimately pass on the validity of the patents.

U. S. Supreme Court Upholds Validity of Patent

In the case of *Graver Tank & Mfg. Co., Inc., et al.* v. *The Linde Air Products Company*, reported at 80 U.S.P.Q. 451, the U. S. Supreme Court in a unanimous decision upheld the validity of four claims dealing with fluxes for use in connection with an electric welding process.

While a number of the claims were held invalid by the Supreme Court this case is believed to be rather significant because it is believed to be the first time that Mr. Justice Black has voted to uphold the validity of any claims of any U. S. patent since he has been on the U. S. Supreme Court bench. The case is believed to be unusually significant also because it may be construed as holding that where the two lower courts have found that the claims are valid the U. S. Supreme Court will not reverse the decision unless the finding is "clearly erroneous." In other words, in such cases the U. S. Supreme Court will not substitute its own opinion but will follow the findings of the lower courts. This may well mean that more patents will be upheld than has been the case in the past.

Recent Patents

U. S. 2,457,779—**Trubek Labs.—Preparation of Methallylbenzene.**

U. S. 2,454,835—**Parke, Davis—N-Propyl Diaminodiphenyl Sulfone.**

U. S. 2,454,949—**Eli Lilly—4-Dialkylaminoalkylamino-6-Methoxy-quinoline.**

U. S. 2,455,193—**Eli Lilly—Aldehyde Derivatives of 2-Aminoalkanes.**

U. S. 2,455,261—**Research Corp.—Ethers of 5-Hydroxy-3-Methyl-Penta-3-En-Yne-1.**

U. S. 2,455,396—**Parke, Davis—Organic Nitrogen Compounds.**

U. S. 2,455,397 and 2,455,398—**E. R. Squibb—Anti-hemorrhagics.**

U. S. 2,455,535—**Schieffelin & Co.—Estrogenics, e.g., 3-ethyl-2, 4-di (p-methoxy phenyl) hexane.**

U. S. 2,455,790—**Eastman Kodak—Enteric Coating Containing Polyvinyl Phthalate.**

U. S. 2,459,817—**Merck—Dihydrothiophene Compounds.**

U. S. 2,460,009—**Winthrop-Stearns—Vitamin. Thiamine-methylene-bis-2-hydroxy-3-naphthoate.**

U. S. 2,460,144—**Sterling Drug—Hydroxyphenyl Alkanolamines.**

U. S. 2,460,224, 2,460,225, 2,460,226—**Merck—Biotin Intermediates.**

U. S. 2,460,439—**Winthrop-Stearns—Benzoyl Peroxide Bleaching Solution.**

U. S. 2,460,550—**J. S. Sharpe Research Foundation—Modified Globin.**

DEPILATORIES IN REVIEW

Part II

U.S. 2,031,489, issued February 18, 1936, for Stable Depilatory, assigned to Parfumerie St. Denis.

This patent features a stable transparent depilatory jelly. The advantage of a transparent jelly, according to the patent, is that the action of the depilatory may be watched and when the hair is curled the depilatory jelly may be removed by simply wiping it off and washing the cleansed surface with lukewarm water.

To obtain a depilatory solution hydrogen sulphide gas is passed into a solution of lithium hydroxide in the presence of an inert gas. For preparing the jelly a single gum or a mixture of gums such as tragacanth, karaya or locust bean gum is dispersed in water under continuous agitation in the presence of an inert gas. To make a transparent depilatory the depilatory solution is added to the transparent jelly base.

In an example, a 15 per cent solution of lithium hydroxide in water is treated with purified hydrogen sulphide gas until the percentage of hydrogen sulphide is about 8.25 per cent by weight. During this procedure a continuous stream of an inert gas such as nitrogen is passed through the liquid and some of this gas goes into solution. A depilatory jelly base is made as above indicated so that it contains about 6.6 per cent of gums. In making the finished depilatory jelly the depilatory solution is added to the jelly base, about 14 grams of the solution being added to about 100 grams of the jelly base.

Claim 1 is typical:

A transparent depilatory jelly containing a lithium depilatory compound containing sulphur and an inert gas.

U.S. 2,062,411, issued December 1, 1936, for Depilatory, to Henrietta A. Fischer.

This patent involves a plastic or waxy depilatory of the "hair-pull" type. Its nature and scope can be understood from the following claim which is the only one in the patent:

A depilatory comprising:

Rosin	**5 lbs.**
Beeswax	**1¼ lbs.**
Synthetic amber	**15½ grains**

the synthetic amber being composed of musk ambrette and labdanum resin, in approximately equal quantities.

U.S. 2,067,909, issued January 19, 1937, for Method of and Means for Removing Hair, assigned to Henry V. Lucas.

Here is another one of the "hair-pull" depilatories, the only claim in the patent reading:

The method of removing undesired growths of hair from human beings which consists in applying to the portion of the skin to be treated a solution of raw rubber in a volatile solvent for the rubber, and permitting the solvent to evaporate until a cohesive coating of the deposited rubber is formed in which the hair is impounded, affixing a sheet of raw rubber to the coating by adhesion, and withdrawing the sheet of rubber with the coating and the hair impounded therein.

U.S. 2,081,279, issued May 24, 1937, for Depilatory, assigned to Neet, Incorporated.

The patent is based on the idea of forming a depilatory compound including a salt in which the acid forming element exists in its highest state of valence whereby the compound is not oxidized, and which yields an alkaline end product on hydrolysis in a rapid reversible system. Examples of such salts are sodium, potassium and calcium titanate.

Depilatories made in accordance with the patent are said to be non-oxidizable inasmuch as the acid forming element, namely titanium, is in its highest state of valence. Furthermore, these depilatories are said to be odorless, non-poisonous and may be suitably buffered so that they are substantially non-irritating when applied to the skin and upon hydrolysis provide an alkaline end product and a reversible system having an effective alkalinity sufficient to attack the keratin molecule.

The broadest claim is claim 1 which follows:

A depilatory compound comprising a salt in which the base forming part thereof includes at least one element of the alkali and alkaline earth metal groups and having an oxygen acid forming part which includes tetra-valent titanium and yielding an alkaline end product on hydrolysis.

U.S. 2,091,313, issued August 31, 1937, for Depilatory to William M. Grant.

A "hair-pull" type depilatory containing honey, rosin, wax and citric acid is disclosed. Claim 3 appears to be the broadest:

A depilatory comprising a normally plastic composition freely spreadable at ordinary temperatures and in its natural state possessing tenacious adhesive qualities for hair, said composition including a waxy substance, a resinous substance, and a normally flowable viscous plasticizer.

U.S. 2,123,214, issued July 12, 1938, for Stabilized Soluble Stannite Depilatory to William B. Stoddard and Julius Berlin.

The patent points out that while stannites have no appreciable odor and therefore are desirable as compared to sulphides, the trouble with stannites is that they are very active and tend to decompose by the formation of stannates and by the interaction of water. To be useful in depilatories, the stannites of course should remain undecomposed for long periods of time.

The patentees propose for use as stabilizers water soluble organic compounds having three or more carbinol hydroxy groups or three hydroxy groups other than those in a carboxyl group and also soluble silicates. Specific examples are triethanolamine, glycerine, dextrine, gum tragacanth, and sugars such as cane sugar, glucose or other hexoses or pentoses. Examples of the soluble silicates are sodium or potassium metasilicate.

Claim 1 follows:

A soluble stannite depilatory solution having a pH value of less than 12.6 and containing alkali silicates as stabilizers.

U.S. 2,128,158, issued August 23, 1938, for Depilatory to Warren Moore.

The main idea of this patent is to reduce the injury or irritation to the skin caused by depilatories. This is said to be accomplished by providing a skin protective liquid comprising a lipin solvent which spreads over the skin before the skin is attacked by the active depilating solution. Suitable lipin solvents are middle range hydrocarbons, especially those containing the

(Continued on page 521)

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YOUR TRADE-MARK RECORD

By JOHN H. GRAHAM
International Patent and Trade-Mark Consultant

The F. T. C. Uses Its Powers Under The Lanham Act—

Some few months ago we discussed the role of The Federal Trade Commission, with respect to the (Lanham) Trade-mark Act of 1946. You will recall that the Act itself authorizes the F. T. C. to petition the Commissioner of Patents to cancel any registration of a trade-mark under certain specific grounds.

The F. T. C. has recently submitted its annual report to Congress covering its activities of the fiscal year ending June 30, 1948. In this report the part which concerns us deals with the powers which the Lanham Act gave to the F. T. C.

It is set forth in this connection that the principal responsibilities of the Commission are to apply for cancellation of registered trade-marks which are deceptive, immoral or scandalous, or which have been obtained fraudulently, *or which are in violation of other provisions of the Lanham Act.* Up to the part which is emphasized, (emphasis supplied) these powers are completely fair and just, in that it is for the public welfare that some Government Agency shall be able to eliminate marks of this nature. The emphasized portion is harder to determine and evidently is a "catch all" for the F. T. C. However, as we have said before in these columns, there is no thought or intention in this "catch all" phrase of putting the Commission into position to act for or replace individual actions involving trade-marks. However, that they have been active and on their toes to protect the public, is evidenced by their report which includes the statement that all registrations and republications issued throughout the year have been scrutinized for deceptiveness in connection with the goods to which each mark is applied and investigations of the circumstances surrounding the use of some 70 registrations were carried out where information indicated that the registrants did not possess the statutary requirements for registration of their trade-marks.

Furthermore, the report stated that at the end of the fiscal year several registrations were under consideration, presumably for cancellation, where the articles or processes with which the marks were associated formed the subject matter of a patent and the patent was about to expire or was already expired.

This latter point is a very important one, which has not so far been dealt with at any length in these columns.

According to the Lanham Act, where a registered trade-mark has become the recognized common descriptive name of the actual article or the process involved in a patent, then upon expiration of the Patent, which is seventeen years from the date of grant, the trade-mark becomes dedicated with the patent to the public and enters into the public domain for anyone to use who desires this. It is therefore a very important question to investigate where a patent exists, for instance, covering a new drug and a trade-mark is chosen for that drug which becomes the name by which it is recognized. Of course it will have a chemical name, but these are always too long, involved and tongue twisting to push them onto the public. An example of what I mean is in order. Since "Aspirin" is no longer a trade-mark in this country, but is a common word for a headache remedy, it will serve well.

Aspirin is acetylsalicyclic acid, and usually I believe, a monoester thereof.

Now if Aspirin were unknown today, and tomorrow someone patented the new drug Acetylsalicyclic acid for medicinal purposes, it would be very bad to christen this "Aspirin," since when the patent expired, the trade-mark would be subject to cancellation.

With the F. T. C. going after offenders by requesting the Patent Office to cancel such marks where the associated patent has expired, matters are even worse, because it means that the patent and trade-mark owner cannot do as before and just drift along, still using the mark until someone infringes or otherwise starts legal action. After seventeen years of sales and promotion the position may be so sound that few would challenge. Now, the challenge is coming from the Government itself in the shape of the F. T. C.

It is hard to say how one can avoid the issue. If you believe in patenting your drugs, as many people do, then you run a risk unless you find more than one name for the product. Even then, one name may stick and over the years become the common descriptive name for the goods. The other name may be discarded by the public and thus the risk is still there.

Probably the best thing to do is to follow the path of certain big companies in the drug field and keep improving the product slightly or slightly changing its formula, each time using a different but phonetically related

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trade-mark, which will preserve the general significance of the mark, but will presumably defeat the argument that any one of the trade-marks used during the life of the patent was the only common descriptive name of the goods.

In any case, it looks like the F. T. C. means business in connection with the new powers they received under the Lanham Act, but if what they have done so far is a gauge of their future course, I am in favor of their actions. They are cleaning out some dead wood from the forest and removing abuses which only stand in the way of a legitimate concern who desires to deal honestly with the public. Up to now it has been difficult, if not well nigh impossible to get rid of any of this sort of dead wood and if the F. T. C. do not abuse their rather wide powers under the Trade-mark Act of 1946 any more than this, they will do a great favor particularly to the drug, cosmetic and allied industries.

The following Trade-Marks were recently published in the official Gazette of the United States Patent Office and are the complete listings through the end of February 1949.

Alli—IV—A—559,234
Lincoln Industrial Chem. Co., Inc., Lincoln Park, Pa.
Ser. June 15, 1948 D. U. Mar. 1, 1947

Anti-Heat—VI—M—532,520
Specialty Products Co., New Orleans, La.
Ser. Aug. 26, 1947 D. U. Aug. 1, 1914

Ardena Complexion Film—VI—C—550,768
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Feb. 28, 1948 D. U. Jan. 20, 1948

Avon—VI—BCHI—536,575
Avon Products Inc., N. Y., N. Y.
Ser. Oct. 3, 1947 D. U. Sept. 1929

Beaumonde—VI—C—557,880
Welch Industries, Colorado Springs, Col.
Ser. May 26, 1948 D. U. July 15, 1947

Beauty in the Morning—IV—A—553,792
Universal Labs. Inc., East Orange, N. J.
Ser. Apr. 3, 1948 D. U. Mar. 22, 1948

Be-Gone—VI—T—553,646
G. D. Stanley, Salisburg, Md.
Ser. Apr. 1, 1948 D. U. Feb. 12, 1948

Betan—VI—S—532,529
Vernow & Vermont Pharm., Dba Betan Co., Los Angeles, Cal.
Ser. Aug. 26, 1947 D. U. April 1946

Blair of Virginia—VI—C—504,921
Morton Mfg. Co., Lynchburg, Va.
Ser. July 27, 1948 D. U. July 1, 1943

Blue Mottle—IV—A—545,919
John Wanamaker, N. Y., N. Y.
Ser. Dec. 31, 1947 D. U. Feb. 1, 1921

Chee—IV—A—514,964
A. R. Patterson Dba Lyman-Ross Co., Seattle, Wash.
Ser. Mar. 1, 1948 D. U. July 20, 1946

Chemia—VI—B—542,321
A. L. Jimenez, Almeria, Spain
Ser. Nov. 25, 1947 D. U. None Based on Spanish Reg. 155,559

Chemia—IV—A—542,320 (and des.)
A. Lopez Jimenez, Almeria, Spain
Ser. Nov. 25, 1947 D. U. Feb. 9, 1946

Chere Madame—VI—BC—550,563
S. A. F. Millot, Paris, France Based on French Reg. 362,736
Ser. Feb. 25, 1948

Conture'—IV—A—546,352
A. Breslauer Export Corp., N. Y., N. Y.
Ser. Jan. 7, 1948 D. U. Aug. 15, 1947

Creme Foam—VI—A—506,371
Elmo Sales Corp., Phila., Pa.
Ser. July 14, 1948 D. U. Jan. 29, 1947

Delica Brow—VI—C—550,371
Whitehall Pharmacy Co., N. Y., N. Y.
Ser. Feb. 21, 1948 D. U. Aug. 20, 1920

Discs—VI—D—507,112 (and des.)
W. L. Sloan, N. Y., N. Y.
Ser. Nov. 24, 1948 D. U. Sept. 1947

Double Feature—VI—H—540,026
Bonne Bell Inc., Lakewood, Ohio
Ser. Nov. 4, 1947 D. U. Oct. 11, 1947

Essence Rare—VI—BC—536,606
Houbigant Inc., N. Y., N. Y.
Ser. Oct. 3, 1947 D. U. Sept. 12, 1928

Fluor-Amm-Ine—VI—K—553,779
M. L. Jordahl Dba Fluor-Amm-Ine Co., Minneapolis, Minn.
Ser. Apr. 3, 1948 D. U. Mar. 10, 1948

Grainfin—VI—C—522,146
Lancome, S. A. Paris, France
Ser. May 9, 1947 D. U. Sept. 25, 1946

Gypsy Bell—VI—B—475,114
W. S. Hieber Dba Henri Monet, Atlanta, Ga.
Ser. Oct. 9, 1946 D. U. Nov. 1928

Gypsy Maiden—VI—BC—534,308
D. A. Molinari, San Francisco, Cal.
Ser. Sept. 12, 1947 D. U. May 1941

"Hairlife"—VI—H—529,649
A. C. Hynd Corp., Tipp City, Ohio
Ser. July 26, 1947 D. U. Since 1922

Hair She-en—VI—H—529,650
A. C. Hynd Corp., Tipp City, Ohio
Ser. July 26, 1947 D. U. Since 1922

Hamandis—VI—Ch—557,197 (and des.)
Mary Mahiques, N. Y., N. Y.
Ser. May 17, 1948 D. U. 1927

Here Comes Loo Loo—IV—A—463,933 (and des.)
A. W. Moeller Dba Loo Loo, Des Moines, Iowa
Ser. Oct. 6, 1943 D. U. June 19, 1940

Ik-Thol-Ine—IV—I—563,184
Iktholine Ltd., Brentford, Middlesex, England
Ser. Aug. 11, 1948 D. U. Mar. 3, 1930

Insectan—VI—C—553,853
Hall & Ruckel Inc., N. Y., N. Y.
Ser. Apr. 5, 1948 D. U. Mar. 30, 1948

I Wonder Who?—VI—B—503,198
W. S. Hieber Dba Henri Monet, Atlanta, Ga.
Ser. June 3, 1946 D. U. Oct. 1932

Jergens—IV—A—549,154
Andrew Jergens Co., Cinn., Ohio
Ser. Feb. 9, 1948 D. U. Since 1890

June Geranium—VI—AB—545,936
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Jan. 2, 1948 D. U. Jan. 1917

Klirzol—VI—C—544,652
Madeleine Labs., Inc., Wilmington, Del.
Ser. Oct. 21, 1947 D. U. June 1, 1936

Let's Make Up—VI—BC—556,467
Parfums Charbert Inc., N. Y., N. Y.
Ser. May 7, 1948 D. U. Apr. 22, 1948

Line-No-Mor—VI—C—555,551
A. Miller Dba Line-No-Mor Co., N. Y., N. Y.
Ser. Apr. 24, 1948 D. U. Jan. 2, 1947

Natural-Le—VI—H—525,314
McBride & Hall, Orange, Calif.
Ser. July 1, 1947 D. U. July 1, 1946

Naturally—VI—C—536,276
Natural Cosmetic Labs., Cleveland, Ohio
Ser. Sept. 30, 1947 D. U. June 1, 1947

Naylon by Lacross Slim Stick—VI—CE—556,990
Schnefel Bros., Corp., Newark, N. J.
Ser. May 13, 1948 D. U. Mar. 15, 1948

Perfumeria Floralia—VI—BCEHK—549,839
Perfumeria Floralia, S. A. Madrid, Spain
Ser. Feb. 16, 1948 Based on Spanish Reg. 24,153 Dated Sept. 29, 1914

Pigtail Parade—VI—BC—490,728
Wetherholt's Perfume Co., Chicago, Ill.
Ser. Oct. 29, 1945 D. U. Apr. 26, 1945

Piney Woods—VI—M—558,135
Glidden Co., Cleveland, Ohio
Ser. May 29, 1948 D. U. Jan. 15, 1923

Pink Fog—VI—C—517,028
Wol Drug Co., Milwaukee, Wis.
Ser. Feb. 4, 1947 D. U. Oct. 19, 1946

Plus 30—VI—C—472,499
Bonne Bell Inc., Cleveland, Ohio
Ser. July 22, 1944 D. U. July 13, 1944

Radiant—IV—A—530,563
Proctor & Gamble Co., Cinn., Ohio
Ser. Aug. 5, 1947 D. U. Jan. 24, 1947

Shower Bar—IV—A—527,932
Hewitt Soap Co., Inc., Dayton, Ohio
Ser. July 5, 1947 D. U. Feb. 26, 1942

Simoneau Terrific—VI—B—521,693
Joseph W. Simoneau, Nashan, N. Y.
Ser. May 1, 1947 D. U. Apr. 2, 1947

Snow White—IV—A—544,751
Morton Mfg. Corp., Dba Snow White Products Co., Lynchburg, Va.
Ser. Dec. 18, 1947 D. U. July 1, 1931

Spruce—IV—I—506,794
A. B. Wrisley Co., Chicago, Ill.
Ser. Aug. 13, 1947 D. U. June 1942

Stepping Out—VI—B—560,417
Lentheric Inc., N. Y., N. Y.
Ser. June 29, 1948 D. U. June 15, 1948

Steralli—IV—A—559,235
Lincoln Industrial Chem. Co. Inc., Lincoln Park, Pa.
Ser. June 15, 1948 D. U. May 1, 1948

Tabbs—VI—K—506,791 (and des.)
Koch Labs. Inc., Winona, Minn.
Ser. Jan 6, 1948 D. U. Dec. 28, 1946

Thee—VI—H—535,272 (and des.)
Thee Products Co., Denver, Col.
Ser. Sept. 22, 1947 D. U. Aug. 1, 1947

Tintabit—VI—H—506,372
Clairol Inc., Stamford, Conn.
Ser. June 24, 1948 D. U. Mar. 20, 1947

Toots—VI—C—545,346
Consolidated Royal Chem. Corp., Chicago, Ill.
Ser. Dec. 24, 1947 D. U. Apr. 23, 1943

Tru-Val—VI—C—554,905
John L. Michael Inc., Flushing, N. Y.
Ser. Apr. 17, 1948 D. U. Feb. 10, 1948

Under Powder Mist—VI—C—541,624
Herb Farm Shop Ltd., Elizabeth, N. J.
Ser. Nov. 17, 1947 D. U. Oct. 1938

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Compounder's Corner

Formula Simplicity and Lipstick Manufacture

In his discussion of the technic of lipstick manufacture, G. Kempson-Jones (Manuf. Chem. & Manuf. Perf 19:341, 1948) puts great stress on the importance of formula simplicity. To use his own words, "Where a lipstick formula has has been selected; or is already in use, it is a good thing to examine it and to question the inclusion of each ingredient. Decide whether there is any material present that is not performing a specific and unduplicated function. This approach to the formulation of cosmetics in general is an excellent way of avoiding the all too common fault of overburdened formulation. The final formula for a product should always be the simplest possible combination of materials consistent with the product possessing all the features required of it. An unnecessarily complex formula reduces the possibility of exact batch-to-batch repetition. It is a frequent cause of shortened shelf life, and makes more difficult the identification of any offending ingredient when trouble does develop."

In considering other phases of lipstick production, Kempson-Jones advises that, after individual examination, the molded lipsticks should be placed in suitable trays. They should be stored or matured for at least a week prior to filling, and be thoroughly protected from dust during that period. During storage the complex wax, oil and color mixture reaches its natural hardness, and less damage is thereby done to the sticks when handled during the filling stage. The finished stick after flaming is also correspondingly improved for the ageing process. With regard to flaming, he emphasizes that this procedure is essentially a device to remove the dulling film caused by storage and handling during molding and filling. It is not a device for overcoming mold and molding imperfections. Too many manufacturers expect miracles to be performed by their filling and flaming section, and then wonder why their products have a second rate appearance.

Perhaps the most frequent fault developing during the flaming process is that of air cavities appearing on the flamed surface of what previously appeared to be a perfect stick. This trouble, if serious, must be tackled at the source, and such points as efficiency of air evacuation, temperature of lipstick mass just prior to pouring into the molds, and the preheating of molds, must all be checked.

Developments in Ion Exchange Methods

The growing importance of ion exchange in the pharmaceutical field is well indicated in the discussion by J. C. Winters and R. Kunin (*Ind. & Eng. Chem* 41:460, 1949) Two general exchanger types—cation exchangers deriving activity from sulfonic acid groups and anion exchangers possessing polyamino substituents as active exchange centers—are responsible for many of the purification and isolation processes and analytical procedures now in general use in the pharmaceutical field. Even greater expansion of the application of exchange phenomena to the purification of products possessing physiological or biological activity is predicted, moreover, by the performance of two new synthetic adsorbents. One resin, Amberlite IR C-50, is a high capacity, bead-form carboxylic acid type cation exchanger; the other, known as Amberlite IR A-400, is a strongly basic anion exchanger. The advantages of these two resins in pharmaceutical processing have been demonstrated by applying them to amino acid separations, alkaloid recovery, isolation of thiamine, and the concentration of miscellaneous compounds such as adenine, pyridine, hydrazine, and ammonia. In the report of Winters and Kunin new ion exchange methods are described for concentrating and separating amino acids into their various charge groups. High capacity, elution efficiency, and buffering ability were found to be the outstanding properties of Amberlite IR C-50, whereas strong basicity and salt-splitting capacity were determined to be the two most interesting features of Amberlite IR A-400.

Booklet on Fatty Alcohols

A highly informative booklet, the "Cachelot Guide to Fatty Alcohols" has been issued by M. Michel and Company, Inc., 90 Broad St., New York 4, N. Y. Presenting considerable data in the form of concise tables, the publication condenses latest data on cetyl, oleyl, and stearyl alcohols; it shows properties, uses, and analysis data. This file-sized booklet is available to chief chemists, production managers, and purchasing agents representing potential users in the chemical industries.

Dental Preparations

Formulas for a large number of preparations commonly used by dentists are given in the February, 1949 issue of *Pharmacy International*. Such preparations serve not only to increase the dentists' efficiency but also to reduce the pain, anxiety and discomfort of the patient. For example, a topical anesthetic, to be employed to anesthetize the gums before using a hypodermic needle or before scaling the teeth, may be made from:

Ethyl aminobenzoate	**8.0 Gm.**
Clove oil	**20.0 cc.**
Benzyl alcohol	**40.0 cc.**

For hypersensitive dentin, a preparation, such as the following is used.

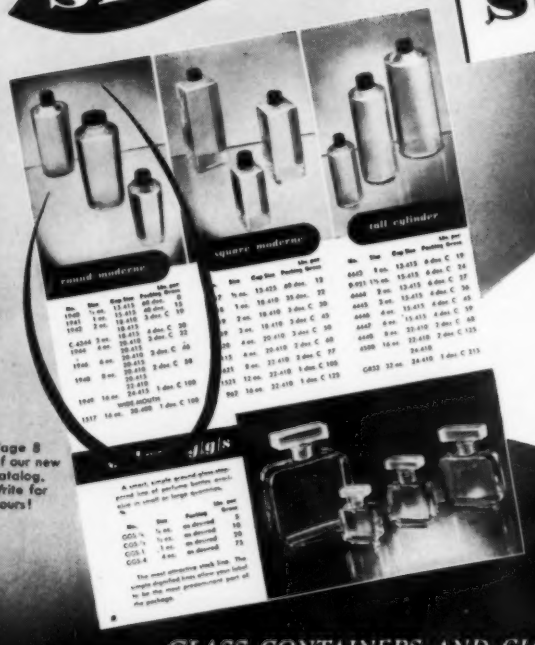
Ethyl oxide	**20.0 cc.**
Thymol	**12.5 Gm.**
Alcohol	**10.0 cc.**

This is known as Hartman's solution. It is applied at intervals to the dry cavity while operating to reduce pain. Another preparation, which is applied to sensitive cavities while grinding or filling consists of:

Ethyl aminobenzoate	**3.5 Gm.**
Benzyl alcohol	**17.5 cc.**
Clove oil	**9.0 cc.**

Two formulas for disclosing solutions are included. These are used to paint the surface of a tooth in order to stain and render bacterial plaques and foreign matter visible.

shopper stopper



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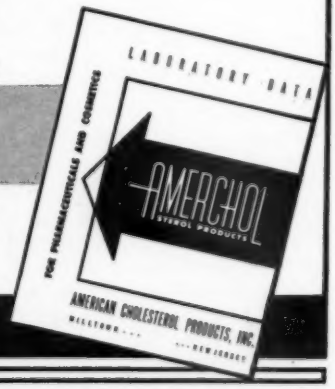

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I

Iodine	3.3 Gm.
Potassium iodide	1.0 Gm.
Zinc iodide	1.0 Gm.
Glycerin	20.0 cc.
Water	20.0 cc.

II

Zinc iodide	12.0 Gm.
Iodine	20.0 Gm.
Water	8.0 cc.
Glycerin	40.0 cc.

This is known as Talbot's Iodo-Glycerol, and is used as a disclosing solution and in the treatment of gingivitis and periodontitis.

The composition of cavity varnishes, which are used to seal deep-seated cavities after preparation for filling, are illustrated in the following formulas:

I

Rosin	4.0 Gm.
Thymol	0.5 Gm.
Menthol	0.13 Gm.
Chloroform, to make	30.0 cc.

Mix and filter.

II

Rosin	2 Gm.
Chloroform, to make	30 cc.

Mix and filter.

III

Rosin	2.0 Gm.
Sodium carbonate, monohydrated	0.5 cc.
Acetone	30.0 cc.

Preparations employed for root canal sterilization are illustrated in the following combinations:

I

Formaldehyde solution	4.0 cc.
Creosol	4.0 cc.

II

Creosol	4 cc.
Formaldehyde solution	3.5 cc.
Geranium oil	1.0 cc.
Alcohol	1.5 cc.

Mix and filter clear.

III

Betanaphthol	4.0 Gm.
Alcohol, to make	30.0 cc.

The composition of pulp capping preparations are illustrated by the following formulas:

I

Thymol	0.2 Gm.
Calcium phosphate	20.0 Gm.
Eugenol, to make a thin, creamy paste.	

II

Thymol iodide	1.0 Gm.
Dicalcium phosphate	4.0 Gm.

Mix and before using add eugenol to give a thin paste.

Dry socket pastes, used for the treatment of pain due to "dry socket" following extractions, made along the following lines:

I

Eugenol	1.2 cc.
Peru balsam	6.0 Gm.
Acetylsalicylic acid	15.0 Gm.
White Wax	6.0 Gm.
Wool fat, to make	60.0 Gm.

II

Ethyl aminobenzoate	3 Gm.
Thymol iodide	1 Gm.
Methyl salicylate	0.3 cc.
Hydrous wool fat, to make	30.0 Gm.

An abrasive paste, for use in cleaning and polishing procedures, is made from:

Powdered pumice	24.0 Gm.
Starch glycerite	36.0 Gm.
Methyl salicylate	0.5 cc.
Amaranth solution (1%)	1.0 cc.

Preparations for use by dentists' patients include denture cleaners and denture adhesives. Typical denture cleaners are given as follows:

I

Trisodium phosphate	120 Gm.
Cinnamon oil	0.3 cc.
Amaranth solution (1%)	2.1 cc.

Dissolve about 1-2 Gm. in a glass of water and use with brush. Do not leave denture in solution over night (cellulose acetate dentures are decomposed by alkaline solutions).

II

Calcium carbonate	75 Gm.
Tri-isopropanolamine	250 Gm.

Water, sufficient to make a paste.

Brush on dentures thoroughly, then rinse with water. (Suitable for cellulose acetate type of dentures.)

Two formulas for denture adhesives are listed:

I

Powdered tragacanth	22.5 Gm.
Powdered karaya	7.5 Gm.
Sassafras oil	0.5 cc.

II

Powdered tragacanth	60 Gm.
Powdered acacia	60 Gm.
Sodium benzoate	0.4 Gm.
Anise oil	0.2 cc.

The preparation of toothache drops is indicated in the following formulas:

I

Clove oil	15 cc.
Phenol, liquefied	90 cc.
Amaranth solution (1%) to color	
Glycerine	180 cc.

II

Creosote	50 cc.
Clove oil	50 cc.
Chloroform	50 cc.

III

Phenol	2.5 Gm.
Menthol	2.0 Gm.
Eugenol	1.0 cc.
Camphor	0.5 Gm.

IV

Chlorobutanol	25 Gm.
Clove oil, to make	100 cc.

Improved Washable Ointment Base from Canada

Investigations have been made by M. J. Huston, B. E. Riedel, J. R. Murray and G. A. Groves (Canadian Pharm. J. 81:999 and 1064, 1948) to develop a satisfactory washable ointment base which would be a suitable vehicle for a large number of medicaments. After a study of 25 oil-in-water emulsion type ointment bases, the Canadian investigators chose the following formula as having the widest field of utility:

"Carbowax" compound 4000	100 Gm.
Stearyl alcohol	185 Gm.
Glycerine	150 Gm.
Sodium lauryl sulfate	5 Gm.
Water	450 Gm.

The amount of water can be varied to give a firmer or more fluid preparation, as required.

In considering this formula for inclusion in the Canadian Formulary it was decided to compare the relative utility of this base with that of the U. S. P. Hydrophilic Ointment and the B. P. (1948) Emulsifying Ointment. Accordingly, samples of each ointment were made up and a series of medicaments incorporated. Evaluation of these preparations showed that, in general, the new Canadian base is superior to the U.S.P. Hydrophilic Ointment and the B. P. Emulsifying Ointment as a vehicle for most of the medicaments examined. In addition the Canadian base stands up better to extremes of temperature (10°C to 50°C) than do the other two bases.

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Advancing Therapy

New Data on Vitamin B_1 Absorption

According to an item in the Journal of the American Pharmaceutical Association, Practical Edition (10:29, 1949), laboratory investigations by T. E. Friedemann indicate that oral doses of more than 5 mg. daily of vitamin B are largely wasted. Furthermore, the continued administration of thiamin occasionally leads to development of an allergic response. Friedemann's findings indicate that although thiamin plays a dominant role in metabolism and is a normal and necessary constituent of animal tissue, the body either has developed no special mechanism for adsorption of the vitamin, or even may have developed barrier mechanisms for thiamin in the intestinal tract. In his experiments, Friedemann's subjects were administered varying doses of supplementary vitamin B in addition to carefully weighed and controlled diets. Destruction and lack of absorption of the thiamin were measured by laboratory examination of bodily excretions.

Antihistamine Drug for Acute Nephritis

No specific treatment has yet been found which will abort acute nephritis or even appreciably modify its course. Treatment up till now has been directed towards providing rest both for the patient and, so far as this can be achieved by dietary restrictions, for his kidneys, in the hope that these organs have not already been irreparably damaged and will eventually recover spontaneously. Hence the importance of the preliminary report by J. Craig, N. S. Clark and J. D. Chalmers (*Brit. Med. J.* 1:6, 1949) on the use of the antihistamine drug, "Anthisan," in the treatment of acute nephritis in children. The drug has given striking results in the treatment of eight cases of the kidney condition. The course of these cases has been compared with that of the nine consecutive cases of this condition admitted immediately preceding the institution of this treatment. All patients in both groups who showed signs of active infection were given courses of penicillin or sulfonamide, but this did not seem to influence materially the course of the nephritis. Hypertensive convulsions were treated on the usually accepted lines by lumbar puncture, hypertonic magnesium sulphate enemata, and sedatives. No other treatment was employed in either group apart from complete rest in bed until abnormal constituents had remained absent from the urine for several weeks and restriction of protein intake as long as azotaemia persisted.

After the first one or two cases had been treated with Anthisan the clinical impression was formed that these cases were clearing up more quickly than would have been expected, and this impression became stronger as more cases were treated. It is pointed out that it is still too early to speak of complete cure in any of the group treated with the antihistamine drug. Much further work will be necessary before the place of Anthisan in the treatment of acute nephritis can be accurately assessed, and it is obviously desirable that this work should go forward as speedily as possible. Treatment with Anthisan is simple, and toxic manifestations with this drug seem to be few and relatively unimportant. If its value in acute nephritis can be proved a considerable advance in the management of this disease will have been achieved.

Expanding Role for Aureomycin

The growing number of reports on the still new antibiotic, aureomycin, indicate that this substance has great potentialities in the treatment of a variety of infections. For example, in the Journal of the American Medical Association (138:-1148, 1948), W. W. Spink, A. J. Braude, M. R. Castaneda and R. S. Goytia report that aureomycin has been administered orally to 24 patients having bacteriologic proved acute and chronic brucellosis due to Br. melitensis. The immediate therapeutic results have surpassed those obtained with any other specific therapy, including a combination of streptomycin and sulfadiazine. The toxic reactions due to aureomycin have been mild. Unless small initial doses of the drug are used, a febrile reaction associated with a drop in blood pressure may be observed. The severity and frequency of these phenomena have been reduced with the administration of small doses of drug at the beginning of treatment. It is emphasized that these encouraging results in the therapy of human brucellosis are concerned only with the immediate effects on the clinical course. These patients are being followed closely for clinical and bacteriologic relapses, and only after a lapse of several months can a definite statement be forthcoming.

In the same Journal (138:1213, 1948), S. Ross and his associates reported that aureomycin was used in the treatment in 13 cases of Rocky Mountain spotted fever during the summer of 1948. The temperature subsided rapidly, within an average period of two and one-third days, and striking clinical improvement was observed in all of the patients. No toxic effects from the drug were noted. Comparison with para-aminobenzoic acid would indicate that aureomycin is a more effective agent in the treatment of spotted fever.

Another application for this antibiotic is indicated in the report of R. B. Greenblatt and his co-workers in the Southern Medical Journal (41:1121, 1948). They used aureomycin for treating four patients with granuloma inguinale who had proved resistant to streptomycin. Intramuscular injections resulting in failure, but the oral administration of aureomycin proved effective.

Sulfenilamide for Edema

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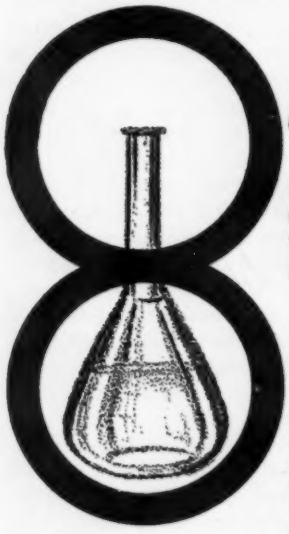

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W. B. Schwartz (*A New England J. Med.* 240:167, 1949), if a specific method were available for producing selective inhibition of the renal tubular reabsorption of sodium from the glomerular filtrate, it might well prove useful in the study and treatment of edema. A possible method is suggested by experimental studies from which it appears that with sulfanilamide administration and decreased acid excretion, the disturbance in acid-base balance should result in failure to reabsorb fixed base from the glomerular filtrate. This loss of fixed base, if maintained, might be expected to lead to diuresis and to the loss of edema. The preliminary report of the studies made by Schwartz appear to substantiate this hypothesis. Three patients with severe congestive heart failure and fluid retention were selected for study. They were confined to bed and chair during the period of study and fed a constant diet containing about 2000 calories and about 300 mg. of sodium. Daily fluid intake was constant. Digitalis was continued, but no ammonium chloride, mercurials or sodium-containing medications were permitted. Urine was collected for twenty-four-hour periods. Sulfanilamide was administered in amounts (4 to 6 Gm. per day) that were designed to keep the serum level at about 12 mg. per 100 cc. The patients were weighed at the same time each day.

From these studies Schwartz has presented evidence which indicates that sulfanilamide is capable of producing an increased sodium, potassium and water excretion in patients with congestive heart failure. It appears that the inhibition of carbonic anhydrase in the cells of the renal tubules is responsible for this phenomenon. Other sulfonamides that are also inhibitors of carbonic anhydrase are under investigation in an effort to find a compound less toxic than sulfanilamide.

Systemic Bacitracin for Infections

According to F. L. Meleney and his associates (Ann. Surg. 128:714, 1948) the purification and standardization of the antibiotic, bacitracin, has reached the stage where it can be used systemically as well as locally in surgical infections. The usefullness of systemically administered bacitracin was determined in 105 cases of surgical infection. For the most part they were cases which had failed to respond to the sulfonamide compounds and to the other antibiotics. There was an over-all favorable response in about 70 per cent of these cases, and in about one-fifth of these the results were dramatic. Of particular interest were 3 cases of extensive progressive bacterial synergistic gangrene, in all of which the patients responded within seventy-two hours and recovered with surgical excision. In the three largest groups, namely, cellulitis, deep abscess and infected accidental wound, favorable results were obtained in three-fourths of the cases. In the dramatic group, the causative organisms were for the most part in the staphylococcus and streptococcus groups. In the latter classification were found hemolytic, nonhemolytic, microaerophilic and anaerobic streptococci. In a considerable number of staphylococcus strains the investigators found resistance to penicillin and susceptibility to bacitracin. In 14 per cent of the cases the results were questionable, and in a slightly higher percentage the results were frankly nil. In most of these cases the causative organisms were resistant to bacitracin. Some of the later preparations of bacitracin made by the deep tank method have shown evidence of nephrotoxicity. When the presently available bacitracin is used systemically, there should be repeated tests of renal function, and treatment should be discontinued if there is any indication of serious damage.

Urethane-Penicillin Mixture for Wounds

A new combination which causes early closure of contaminated wounds has been described by C. W. Howe (*Surg., Gynec. & Obstet.* 87:425, 1948). He reports that primary healing occurred in an average of 7.41 days in 11 of 17 patients with postoperative wound infection, following treatment with a mixture of urethane and penicillin. Eight patients had a colostomy in or next to the wound. There were two failures. Wide-open drainage, culture and careful debridement were done on discovery of the infection. Abdominal wounds were opened down to the peritoneal layer and all devitalized tissue was excised. Two cc. of the urethane-penicillin mixture (10 per cent urethane solution containing 1,000 units of penicillin per cc.) were instilled every two hours in two small catheters anchored into the gauze-packed wound. Packs were changed as soon as they became grossly contaminated with fecal material. The wound is inspected on the operating table the third to fifth day, for immediate closure under light Pentothal anesthesia. In one case suppuration developed when isotonic solution of sodium chloride was substituted for the urethane solution; after reinstitution of urethane therapy, the wound again became clean.

Antabuse for Alcoholism

Several years ago it was observed that the industrial compound tetraethylthiuram disulphide, produces a hypersensitivity to alcohol. On this basis, several Danish investigators have considered the potentialities of this chemical for the treatment of alcohol addiction. For example, the pharmacology of this compound has been studied by Asmussen and his associates (Acta Pharmacol. 4:285, 1948). They found that while it has a high toxicity to lower animals, it has a very low degree of toxicity for mammals. In man, single doses of up to 6 Gm. are tolerated without symptoms other than those which follow intake of alcohol. Smaller doses, 0.25 to 0.75 Gm. per day, taken over a period of months are well tolerated by patients under treatment. The compound has been given the name "Antabuse."

Further examination of this compound has been carried out by J. Hald and E. Jacobson (Lancet, 2:1001, 1948), who observed the effect of alcohol on persons previously treated with tetraethylthiuram disulphide. It produces dilatation of the facial vessels, increased pulmonary ventilation, rapid pulse-rate and general uneasiness. The authors consider that the symptoms appear to be the result of an increased formation of acetaldehyde from alcohol. A report on the result of treating 83 cases of alcoholism is published by O. Martensen-Larsen (Lancet 2:1004, 1948); promising results were obtained in 74 patients. The general scheme of treatment was to give the patient 1 to 1.5 Gm. of Antabuse, with instructions to continue with 0.5 Gm. daily. In most cases, subsequent consumption of alcohol caused the reactions described. It is considered that further observation is required for complete assessment of the results.

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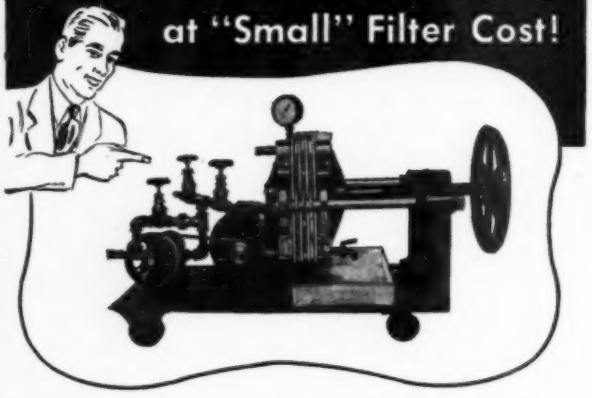

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Industry's Books

An Introduction to Materia Medica and Pharmacology, by Elsie E. Krug, R.N., M.A., Instructor in Pharmacology and Anatomy and Physiology, St. Mary's School of Nursing, Rochester, Minn., and Hugh Alister McGuigan, Ph.D., M.D., Professor Emeritus of Materia Medica, Pharmacology and Therapeutics, University of Illinois, College of Medicine, Chicago, Fifth Ed., 558 pp., Illus., C. V. Mosby Co., St. Louis, $4.

This revision has been brought up to date in accordance with the changes in the United States Pharmacopoeia XIII and the National Formulary VIII. A number of promising new drugs approved by the Council on Pharmacy and Chemistry and included in New and Nonofficial Remedies, are described. A few preparations which nurses have occasion to administer but which have not yet been approved by the Council are also included. The drug descriptions added to this revision include Benzalkonium Chloride, U.S.P. (Zephiran Chloride); Phemerol Chloride, N. N. R.; Trimethadione, N. N. R. (Tridione); Diphenhydramine Hydrochloride, N.N.R. (Benaldryl Hydrochloride); Pyribenzamine; Streptomycin, N.N.R.; Sulfapyrazine, N.N.R.; Sodium and Potassium Thiocyanate; Folic Acid, N.N.R.; Ethylstibamine, N.N.R.; Dihydroergotamine; Digitoxin, U.S.P. Additional material about Penicillin and the vitamins has also been added.

Microbiology and Pathology, by Charles F. Carter, B.S., M.D., Instructor in Pathology and Applied Microbiology, Parkland Hospital, School of Nursing, Dallas, Texas, 845 pp., Illus., Fourth Ed., C. V. Mosby Co., St. Louis, $5.

Since the appearance of the last edition of this book the sciences of both microbiology and pathology have undergone great progress. In the field of microbiology, development has been truly phenomenal because it was during this time that the sulfonamide compounds reached their present state of effectiveness and the antibiotic drugs came into practical use. So rapid has been this development that methods which only a few years ago were new are now obsolete. In revising the chapters on microbiology it has been the purpose of the author to omit the obsolete and include the new. This has necessitated a revision of all chapters and in the case of some chapters this revision has been very extensive. The treatment of microbial infections by means of the sulfonamide compounds and the antibiotics is discussed. A new chapter on Approved Methods of Immunization has been added. In the section on pathology much of the material has been rearranged and rewritten. Infectious hepatitis and homologous serum jaundice are discussed. New chapters on the Hospital Pathologist and His Work and on Defects of Body Development have been included.

The Biology Of Bacteria, by Arthur T. Henrici, M.D., Professor of Bacteriology, University of Minnesota, Revised by Erling J. Ordal, Ph.D., Associate Professor of Microbiology, University of Washington, Third Ed., 577 pp., D. C. Heath And Co., $4.60.

In the ten years since the second edition of this work was published there have been many additions to and reinterpretations of knowledge of the microorganisms and their relationships to each other and to the higher plants and animals. Among other developments: the electron microscope has been proved and accepted as a tool of the microbiologist, and its use has contributed to the knowledge of the structure of microorganisms; our concepts to the knowledge of the structure of microorganisms; our concepts of bacterial heredity have undergone marked change; much has been learned about the physiology and nutrition of microbes; and many advances have been made in our knowledge of the viruses. Elementary aspects of these advances and many others have been included in this edition.

Bacterial And Virus Diseases, Antisera, Toxoids, Vaccines and Tuberculins in Prophylaxis and Treatment, by H. J. Parish, M.D., Clinical Research Director, Wellcome Foundation Ltd., 168 pp., Williams and Wilkins Co., Baltimore, $2.75.

This book has been written to present in convenient form the essential principles of immunology and their practical application in human medicine. The three main divisions of the work include: I. General. II. Antisera. III. Serological Products for Active Immunization and Some Diagnostic Reagents.

Information Sources For Small Business, by James C. Yocum and Emma Ferrin, Bureau of Business Research, College of Commerce and Administration, The Ohio State University, Columbus, 50c.

This contains a selected list of sources of information on beginning and operating a small business. This second edition is completely revised and much enlarged, so as to constitute virtually a new publication. The new edition adds many new items selected from the increasing volume of small business materials published since the war, and provides carefully authenticated information on the "in-print" status of each listed item.

Arterial Hypertension, by David Ayman, M.D., Instructor in Medicine, Tufts College Medical School, Edited by Henry A. Christian, A.M., M.D., LL.D., Hersey Professor of the Theory and Practice of Physic, Emeritus, Harvard University, $2.50.

Dr. Ayman has described in detail in this book what controls are necessary to proper evaluation of the effectiveness of methods of treatment of essential hypertension and then in this light has subjected to critical analysis such methods of treatment as restricted dietaries, potassium thiocyanate in doses checked by determination of levels of the drug in the blood and sympathectomy, the only forms of treatment that seem to be of any real value. Sympathectomy has been examined particularly from this point of view, and its indications, limitations and results are discussed. Dr. Ayman has had an extensive experience with hypertensive patients, whom he has subjected to long continued, thorough, clinical study in the homes of the patients, in the out-patient clinic, and in the wards of a hospital, before, after, and when undergoing various forms of treatment, including sympathectomy, and so is particularly well suited to write a useful, practical, informative discussion of hypertension; this is what he has accomplished in this book.

Perfumer's Shelf

Jasmone in Peppermint Oil

In the tailings (comprising a few per cent of the crude oil) of American, Russian, Japanese, Italian and Bulgarian peppermint oils, H. Schmidt (*Chem. Ber.* 80:538, 1947) found the following new constituents which, in part, materially influence the fine odor and taste of the oils: jasmone; a sesquiterpene ketone, $C_{15}H_{24}O$; a sesquiterpene alcohol, $C_{15}H_{26}O$; *l*-caryophyllene; another bicyclic sesquiterpene; and an octenoic acid in free and esterified form. The American oil is rich in menthofuran, while the Japanese oil lacks jasmone and menthofuran. The tailings of the different oils differed but little in their physical constants and chemical composition and only the working up of the Russian oil tailings is described in detail. These had the following properties:

Specific gravity	**0.944**
Specific rotation	**−19°30′**
Index of refraction	**1.48712**
Acid number	**11.8**
Saponification number	**84**
Saponification number after acetylation	**190**
Carbonyl ($C_{10}H_{16}O$) content	**10.4%**

Jasmone, although present in only very small amounts (probably less than 0.1 per cent), is believed to be a characteristic and exceedingly important odoriferous constituent of the American, Russian, Bulgarian and Italian peppermint oils. While jasmone is readily isolated as the semicarbazone, no solid derivative of the sesquiterpene ketone could be obtained. The portions of the oil which did not react with semicarbazide were therefore removed by steam distillation and the oily semicarbazone of the sesquiterpene ketone was decomposed with phthalic acid; yielding a light yellow oil with an odor somewhat reminiscent of camomile. It contained 85 per cent ketone and had a specific gravity of 0.9497, a specific rotation of 3° and a refractive index of 1.4998. From 7 kilograms of American peppermint oil Schmidt obtained 250 Gm. of crude cineole and 145 Gm. of menthofuran.

Theories on Odor Perception

In a talk before the American Society of Perfumers, Inc. on February 16, 1949, H. Goodman, the well-known dermatologist, expressed his belief that the power to appreciate odor depends upon emulsion making or emulsion breaking. Emulsion making was defined as the preparation of a uniform mixture of otherwise immiscible substances. Early in his discussion, Goodman pointed out that it was necessary to predicate the existence of particles (e.g. the ancient "odorous particle" principle). He quoted the experiment of Robert Boyle of measuring an odorous mass of musk before and after it had perfumed the atmosphere and no change in weight on the finest balance was noted. The odorous substance must be volatile at the environmental temperature to enable its molecules to reach the nasal section devoted to odor appreciation.

In discussing other theories, Goodman said that his "guess" was for an emulsion to be formed of the odor particles with the lipid or fat-like covering of the free nerve cilia or hairs. The delay in appreciation of some odors compared to others depended upon the ease of this emulsion making. When a person has a cold and running nose, the excess of water prevents the emulsion from forming and odor is not appreciated. Contrary, if the mucous membrane of the nose is thinned or absent as in certain diseases, atrophic rhinitis, for example, odor is not appreciated at all,

Another theory was the existence of some variant of electro-magnetic vibrations. Old fashioned ideas were the vibrations started at the odorous material but the latest variation of this theory holds the vibrations begin within the nose. A fourth theory combines several of the others. The particles are important. The vibrations are important. Only with this fourth, and as with the emulsion theory, original thought on the subject, the lining of the odor-perception inch square area within the nose sets up radiation across the space in the tent high within the nose. The particles interfere with the stream of vibrations. The sending apparatus is influenced by the fluid on its surface hence the emulsion characteristics of the lipid covering exercises a monitor or control service.

Goodman also discussed historical background of odor in industry, civilization, exploration and just plain ornamentation. As a skin specialist, he explained how the same odor gave entirely different impressions when utilized by different persons. Scent from the same bottle offers entirely opposite odor memories from the application to the body or intimate clothing of many persons. Also the same odor affects different people variously at one time; or differently at periods separated by hours or weeks. A perfume enjoyed on another person does not appeal when worn by oneself. It is the composition of the odor plus the odor characteristics of the body, either unclothed as when the perfume is applied directly to the skin or from the clothing and the odors adherent to it from the environment when sprayed on apparel worn close to the skin.

Goodman regards all living matter as emulsions. He considers the uniform mixture of otherwise immiscible substances the very basis of life and living. The modes of making emulsions include physical agitation, physical addition, chemical addition including saponification and physio-chemical or colloid emulsion makers. These substances are themselves emulsion breakers. The possibility of appreciation of odor is a requirement for animal rather than vegetable life. When the animal acquired locomotion, when he moved from place to place, he needed his nose to warn him of danger and dangerous places and things. With civilization, sight became more important than odor. Hence, human beings belong to an odor appreciation class of low order compared to the dog. The dog lives by odor.

Sources of Analytic Standards for Essential Oils and Related Products

As their contribution to the first annual review of analytic chemistry, E. Guenther and E. E. Langenau (*Analyt. Chem.* 21:202, 1949) discuss essential oils and related products They point out that the analysis of essential oils and related products is a highly specialized field of analytical chemistry. Because of the chemical complexity of these natural products, procedures must be standardized carefully to give reproducible results. As the analytical data obtained seldom represent actual percentages of single constituents, procedures that are but slightly modified may give very different results. Because of this fact, a new procedure is not accepted readily; those methods which are included in an official compendium such as the United States Pharmacopoeia or the National Formulary soon become firmly established. The U.S.P. XIII contains specifications for eighteen essential oils and in addition provides standards for some seventeen sundry items of interest to the essential oil trade—e.g. floral waters, isolates, balsams and certain synthetics. The N.F. VIII provides monographs for some thirty-three essential oils, synthetics, oleoresins and other products of related interest. Also cited is the fact that the 1948 edition of the British Pharmacopoeia provides similar data on twenty-nine essential oils, synthetics and isolates, balsams and other materials. It is noted that the Dispensatory of the United States, which is closely associated with the U.S.P., the N.F., and the B.P., includes data on many essential oils and related products which are not official.

Guenther and Langenau state that a noteworthy step toward the standardization of analytical procedures and the maintenance of high quality is to be found in the specifications and standards of the Essential Oil Association of the United States. The Scientific Committee of this body has drawn up specifications for the best grade of material commercially available. Procedures for the determinations and assays are given in "E.O.A. No. 1, Determinations;" modifications, when necessary, are given in the individual monographs. This ambitious program was begun in 1946 and will be continued. The following standards and specifications have been approved by the membership of the Essential Oil Association and published in loose-leaf form:

Essential oils

- **Oil of bois de rose Brazilian**
- **Oil of cajuput**
- **Oil of cedarwood**
- **Oil of citronella Ceylon**
- **Oil of citronella, Java type**
- **Oil of copaiba**
- **Oil of ginger**
- **Oil of grapefruit**
- **Oil of lemongrass (East Indian and West Indian)**
- **Oil of palmarosa**
- **Oil of patchouly**
- **Oil of petitgrain Paraguay**
- **Oil of spike**
- **Oil of spruce**
- **Oil of vetiver**

Synthetics and isolates

- **Aldehyde C-10**
- **Amyl salicylate**
- **Benzyl acetate**
- **Cinnamic alcohol**
- **Citral pure**
- **Citronellol**
- **Dimethyl anthranilate**
- **Geraniol**
- **Geranyl acetate**
- **Heliotropin**
- **Hydroxycitronellal**
- **Indol**
- **Linalyl acetate**
- **Methyl anthranilate**
- **Nitro musks**
- **Phenyl acetic acid**
- **Phenyl ethyl alcohol**
- **Safrole**
- **Terpineol**
- **Terpinyl acetate**

Classification of Odors

An interesting classification of odors has been presented by M. Billot in *L'Industrial de la Perfumerie* (through *Soap, Perf. & Cosmetics* 22:56, 1949). Conceding that it is not scientific, Billot feels that the following classification may be of some practical use to compounding perfumers:

FLORAL SERIES

- **Rose tone**
- **Jasmin tone**
- **Hyacinth tone**
- **Lily/Lilac tone**
- **Orange tone**
- **Tuberose tone**
- **Violet tone**
- **Mignonette tone**

WOOD SERIES

- **Spicy tone (pepper)**
- **Sandalwood tone (sandalwood)**
- **Caryophyllaceous tone (cloves)**

COUNTRY SERIES

- **Mint tone (mint)**
- **Camphoraceous tone (rosemary)**
- **Herbaceous tone (lavender)**
- **Verdurous (violet leaves)**
- **Lichenous (earthy) (oak moss)**
- **Leguminaceous (methyl heptenone)**

BALSAM SERIES

- **Vanilla tone (vanilla)**
- **Olibanum tone (incense)**
- **Galbanum tone (galbanum)**
- **Resinous tone (gum)**

FRUITY SERIES

- **Hesperidean tone (bergamot)**
- **Aldehyde tone (fatty aldehydes)**
- **Almond tone (bitter almonds)**
- **Aniseed tone (aniseed)**
- **Fruit (peach, plum, strawberry)**

ANIMAL SERIES

- **Musk tone (musk)**
- **Castoreum tone (castoreum)**
- **Civet tone (civet)**
- **Seaweed tone (kelp)**
- **Amber tone (ambergris)**

EMPYREUMATIC SERIES

- **Smoky tone (birth tar)**
- **Tobacco (tobacco)**

REPULSIVE SERIES

- **Casein tone (cheese)**
- **Garlic tone (garlic)**
- **Fishy tone (fish)**
- **Stagnant tone**
- **Butyric tone (rancid)**
- **Hircine tone (goat)**
- **Mildew tone**
- **Pyridine tone**
- **Mercaptan tone**
- **Carbylamine tone**

EDIBLE SERIES

- **Butyraceous tone (butter-diacetyl)**
- **Broth tone**

Essential Oil of Pectis Papposa

The essential oil of *Pectis papposa* has been studied by C. E. Bradley (*Proc. Conf. on Cultivation Drug and Assoc. Econ. Plants Calif.* 1947, pp. 263-7). He found that the oil contains 50 per cent cuminaldehyde, 25 per cent ketones (probably 20 per cent pinocarvone and 5 per cent carvone), and 25 per cent of a terpene hydrocarbon (probably beta-pinene). Four samples of the green plant had, respectively, the following oil content: 0.60, 0.44, 0.45 and 0.40 per cent by weight. Similarly the oil content of the dry plants were 1.88, 1.76, 1.13 and 0.50 per cent by weight.

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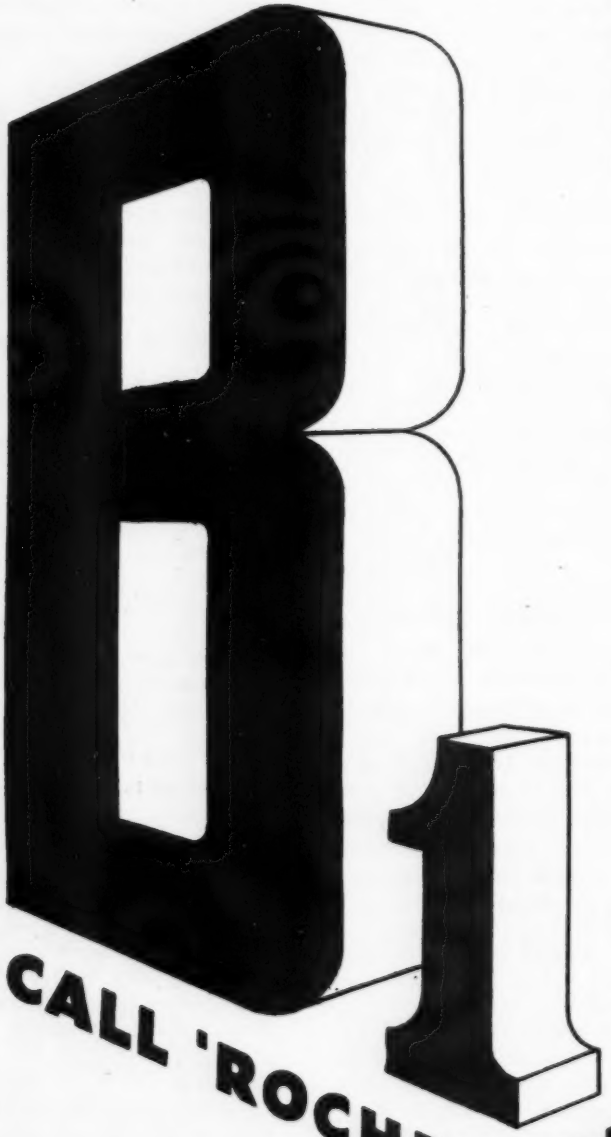

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Abreast of the Markets

Alcohol Firms Up As Price War Ends. Glycerin Prices Slashed As Fats Decline; Synthetic Production Mounts.

The general market conditions in drugs and fine chemicals remained quiet during the period under review and the volume of business was below levels of a year ago. Penicillin salts were reduced in price. Secondary butyl alcohol and isobutyl alcohol were as yet unaffected by the drop in normal butanol prices. Glycerin prices were still firm, but it was felt in some quarters that a change is imminent. Mercurials and bismuth salts were unchanged in price and moving at a very low volume of trading. Alcohol remained at its sub-cost price levels, but recent developments would indicate that producers have weathered the storm and that before long prices would be adjusted more nearly on the basis of production costs.

Alcohol Storm Abates

Reports have come from Havana to the effect that the contract to sell the rest of its 1948 molasses crop, about 80 million gallons, to Publicker Industries, Inc., of Philadelphia, has been rescinded.

The contract, signed last year by the Cuban Sugar Stabilization Institute, pegged the price of molasses to the price of alcohol. Since the contract was made, the price of alcohol has declined from about 85c a gallon to 21c a gallon. That has brought the price of molasses according to the contract terms down to about 4c a gallon from a high of 20c.

Trade circles in Havana said about half the molasses called for by the contract had been delivered to Publicker.

The Institute simply announced that the contract was rescinded and gave no reason. There is a strong belief here, however, that the Institute thought American alcohol distillers deliberately cut alcohol prices to knock molasses prices down.

The Institute also announced that 28,500,000 gallons of molasses had been sold to A. I. Kaplan, distributor of molasses for feeding live stock in the United States. It said the sale was at a fixed price but did not name the figure. Possibilities of sales to other concerns are being studied, the Institute said.

The Instituto Cubano de Estabilizacion del Azucar has been appointed the sole selling agent for the 1949 crop of Cuban molasses which is estimated at 275,000,000 gallons. Out of the 80,000,000 gallons of the 1948 crop that was sold to a large distiller here based on a sliding scale of alcohol prices, approximately 40,000,000 gallons has been shipped. After additional sales to other sources are deducted there remains unsold about 12,000,000 gallons of molasses from the old crop

After discussing all factors in the situation there was some conjecture as to what price level alcohol would advance. It was certain, however, that an advance would have to develop because the industry could not continue to operate at a loss

If alcohol prices reflect a molasses f.o.b. Cuban basis cost of 5c per gallon, alcohol at a normal profit should be priced at around 35c per gallon. However, it was felt that the recovery to any such level would be slow in developing, and that alcohol prices were likely to stabilize at less than 35c because of two factors:—The industry might decide to operate at less than a normal profit in order to maintain prices at a level supposedly competitive with methanol for the antifreeze market. Prices might also be held down for an indefinite period, below those levels which it should normally seek, by virtue of large inventories of molasses in certain quarters at lower than new crop market levels

The Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department, on March 4, released data on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of January, 1949, in comparison with January, 1948:—

Production

	Proof gallons	
	1948	1947
Ethyl	26,572,665	17,395,751
*Completely denatured	142,650	600,879
*Specially denatured	12,712,346	11,975,588

Withdrawals

	Wine gallons	
	1948	1947
†Ethyl, tax paid	2,988,152	2,580,500
tax free	23,942,855	16,902,324
*Completely denatured	163,770	545,979
*Specially denatured	12,775,440	11,885,545

Stocks

	Gallons	
	1948	1947
†Ethyl	37,153,749	21,247,964
*Completely denatured	157,517	106,202
*Specially denatured	1,978,398	1,744,390

* Wine gallons. † proof gallons.

Glycerin Price Decline Drastic

Glycerin prices were drastically reduced during the mid March trading period. A reduction of 14¾c per pound toppled this commodity from its previous 39½c level to 25½c per pound for U.S.P. grade. The feeling was generally held for some time that a price adjustment was likely to develop. Meanwhile business had been quiet because of the feeling among buyers of the imminence of a price break. With crude material moving at 7c per pound, or 9c per pound below former levels, the maintaining of firm refined glycerin prices was held to be hardly justified.

Codliver Oil Output Cut by Norwegian Storms

Cables received March 4 from Norway by the Peder Devold division of Charles L. Huisking & Co., reported that production of codliver oil to February 26 totaled but 9,794 hectolitres, in comparison with 16,155 hectolitres to February 21, 1947, which was a poor production year, and with 34,829 hectolitres to February 21, 1926 when production was large. The very small output in January and February was attributed to violent storms that stopped operations almost entirely.

The policy of codliver oil importers has been to get the prices on that article down and success had crowned such efforts in both Iceland and Norway. Underproduction indicated above suggested to the trade here that present prices would not be reduced and might be advanced later.

The 1949 fishing off Finnmark, northern coast of Norway, has been a complete failure due to extremely stormy

(Continued on page 503)

• Prices quoted in this section were current on the first of this month,

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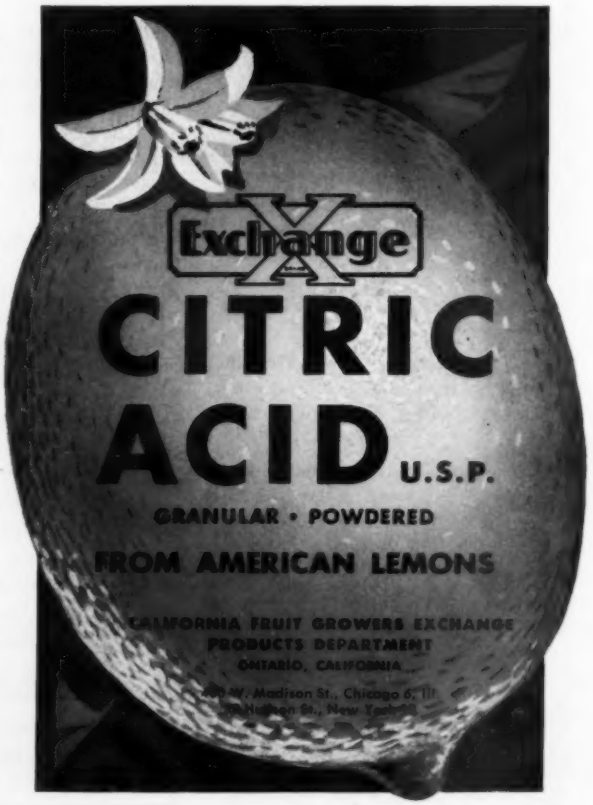


Essential Oils Continue In Price Decline. Citrus Oils and Mint Oils Drop in Price In Soft Market.

Changes in the prices of essential oils during the trading period under review were mainly downward. Technical cajeput, native cananga, expressed orange, peppermint, and spearmint were reduced. Prominent among influential price declines were Brazilian bois de rose, cassia, California lemon, lemongrass, Italian orange, and mandarin. Italian bergamot rose sharply to a range of from $4.05 to $4.50, representing a very strong spot in an otherwise soft market.

The large 1948 production of spearmint oil occasioned a sharp drop in the price of this commodity.

Imported oils for domestic consumption totaled 384,643 pounds in November, a 39 per cent decrease from the October tonnage. The number of individual oils reflecting import increases was 12 while 18 oils were in lesser quantity. November compared with October. Arrivals during the first 11 months of 1948 totaled 5,681,322 pounds.

Citrus Oils Down

The sharp rise in price of California lemon oil following the recent freeze on the West Coast was atttributed by trade sources to higher wages, transportation packing, and generally higher costs, and not to the sudden drop in temperature. Ordinarily a lower price would be expected following a freeze as more fruit would become available for processing into oil.

Since this recent eruption the market on California oil has softened with spot oil now offered at a range of from $2.85 per pound to $2.90, with the largest producer quoting $3 as a minimum. Italian oil remained steady at $3.25 per pound minimum. The principal harvest of Italy is about completed; it usually runs from November through April.

Competition in orange oil seemed to be broadening steadily as new crop goods from various sources was offered at prices that, it was hoped, would attract buyers. Distilled oil was as low as 60c per pound with a top of $1. California oil was at least as low as 70c per pound with Floridian oil openly offered at 65c per pound. Italian oil appeared to be entirely out of the running because high first costs failed to meet the prices at which producers of domestic oil were willing to sell. Italian oil was around $5.25 per pound and domestic oil ranged from 65c to $1.75 as to producer and dealer.

Mint Oils Down

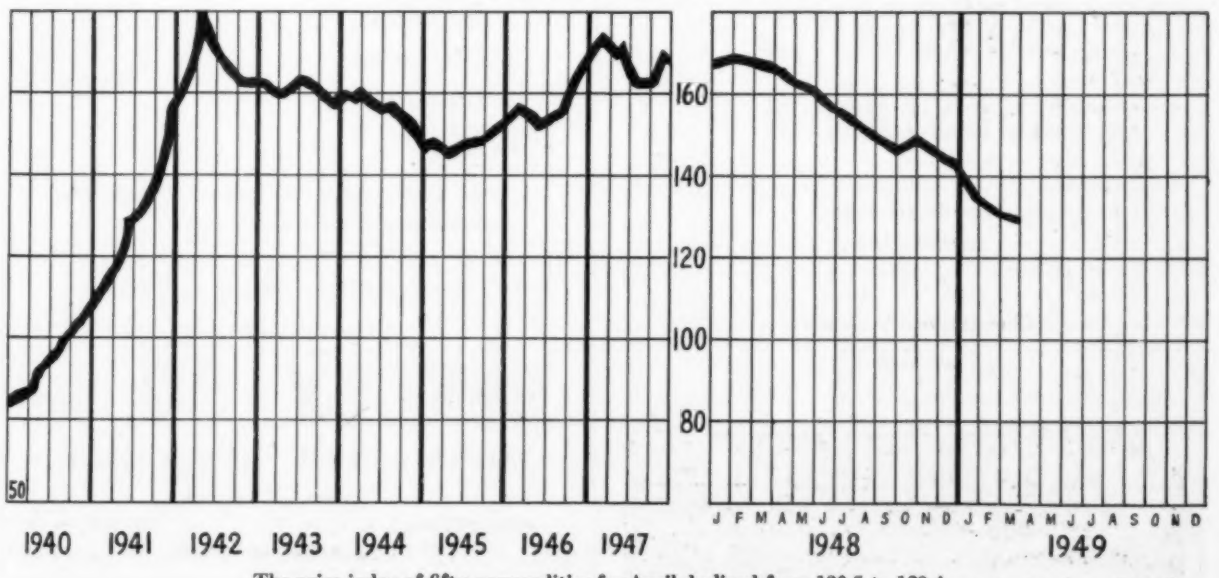
The large 1948 production of spearmint oil occasioned a sharp drop in the price of this commodity. Weakness was widespread, especially in view of the very small demand arising from consuming quarters during the past month. It was surely a buyer's market on the basis of $4.30 to $4.75 per pound. This is in sharp contrast to prices a year ago when spearmint oil was selling on spot at $8.50 per pound. The prewar price was $2 a pound at a normal range. However, it is not expected prices will drop to such a level again if for no other reason than that the dollar of 1949 is not that of 1939 in buying power. A new "normal" seemed likely eventually to be established. Since production in 1948 was very large all dealers expect that acreage planted will be sharply curtailed in 1949.

It was generally conceded that the market in peppermint oil was greatly unsettled and demand was not sufficient to put a check to the downward tendency of prices. In normal quarters natural oil was offered at $6.50 per pound minimum, and redistilled at $6.75. It was hinted, however, that offerings of natural oil at $6.15 and redistilled at $6.65 were bandied about.

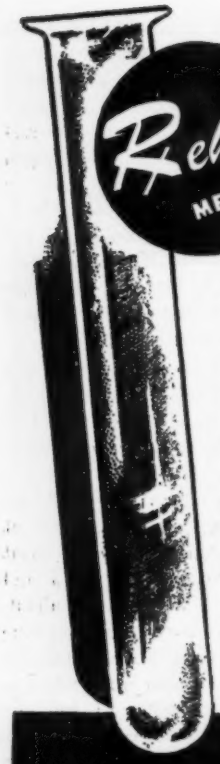
It is not so far away from the time when farmers in the middle and far west will be putting new crop roots into the ground. It remains to be seen what effect price progress during the past year will have on the acreage planted in 1949. A year ago natural peppermint oil on spot was priced at $7.55 to $8.75 per pound, in contrast to today's $6.50. Redistilled oil was $8.25 to $9.25 per pound in the first week of March last year. Today the price is $6.75 minimum.

In studying these figures some dealers were of the opinion that farmers would grow less peppermint this year than they did in 1948.

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for April declined from 130.5 to 129.4.



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MARCH PRICE CHANGES

UP

Bergamot oil 30c
Birch oil sweet, Northern 50c
Carnauba wax #1 1c
Chloral hydrate 17c
Wintergreen oil 60c

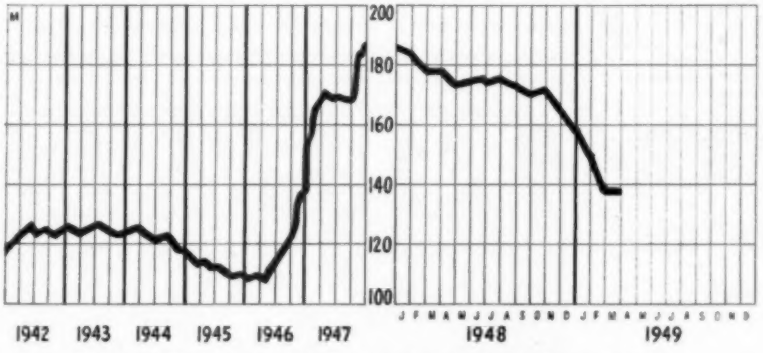
DOWN

Alcohol Ethyl 14c
Anethol 10c
Apricot kernel oil 11c
Arabic gum sorts ¾c
Arnica flowers 15c
Balsam Peru 10c
Tolu 25c
Belladonna leaves 10c
Benzyl propionate 10c
Bois de Rose Braz. 5c
Cajuput oil 5c
Cananga oil Native 15c
Cantharides Chinese 15c
Cascara sagrada 5c
Cassia oil redist. 5c
Castor oil USP 7¼c
Cocoa butter 6c
Colocynth pulp 15c
Glycerin 14-¾c
Helonias root 5c
Lemon oil Calif. 5c
Lemon grass oil 5c
Peppermint oil Nat. 30c
Redist. 30c
Rhubarb root HD 5c
Senega root 25c
Senna Alex. 2c
Spearmint oil 5c
Vanilla beans Bourbon 75c

Bergamot Up

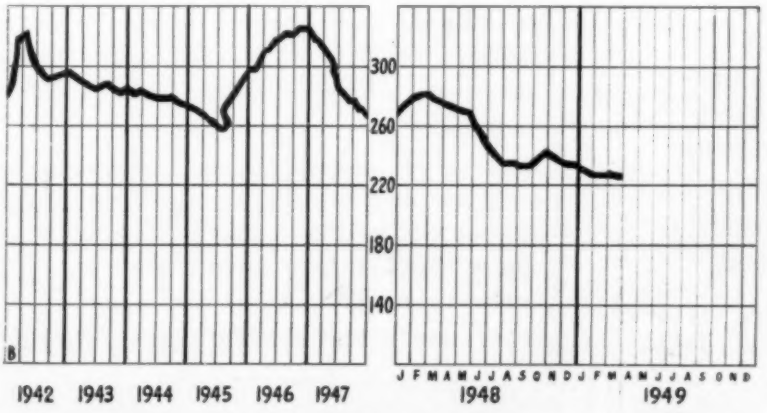
During the past month spot prices on bergamot oil were adjusted upward to the new price range of from $4.05 to $4.50 per pound. Prices continued to display substantial strength at the new level. The rising market has brought some improvement in the amount of business coming to spot suppliers and that has been added strength to the substantially improved market on this commodity, and materially helped the Italians maintain their basic price ideas.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index remained without change at 138.3.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index declined from 234.1 to 227.4. Balsam Tolu, Belladonna, Cascara, and Rhubarb were lower.

Cod Liver Oil

(Continued from page 499)

weather, according to a report received by Arista Oil Products Company, New York, from its principal, Brodr. Aersaether A/S, Aalesund, Norway. It added that adverse weather also existed in the Lofoten area until quite recently, when there was a turn for the better.

The report stated that the quality of the fish recently caught has been good and the oil yield very satisfactory. The fish were apparently well fed, it stated, resulting in a good quality of oil. Catch of codfish, in tons, and production of codliver oil, in hectolitres (one HL. equals 202.82 pounds), for the winter fishing season up until March 5 in the past five years was reported as follows:—

	Codfish	*Oil*
1949	34,376	16,016
1948	48,099	21,627
1947	98,665	55,081
1946	83,216	42,984
1945	34,897	16,809

Fats, Oils World Output Last Year Topped 1947

World production of fats and oils from the important vegetable and animal sources in 1948 is estimated to be less than 21,000,000 tons in terms of oil, a total slightly greater than in 1947, but still nearly 4 per cent below the prewar level, according to the Office of Foreign Agricultural Relations.

Shipments in 1948 of the raw materials and fats and oils from producing countries were slightly less than 4,000,000 tons. This volume of fats and oils was greater than the movement in 1947, but was only 61 per cent of the prewar shipments of 6,500,000 tons. Some relaxing of controls over the movement of fats and oils has probably resulted in freer trade in these commodities, the agency said. Shipments during 1948 were at a level considerably higher than was anticipated on the first of the year.

Supplies of fats and oils and the raw materials available for international trade in 1949 are expected to be considerably greater than the movement estimated in 1948, it was added. If the expected quantity of fats and oils to be derived from vegetable oilseeds produced in 1948 and from the palm oils and animal fats produced in 1949 are made available for export, total shipments from these supplies may exceed the 1948 shipments by more than 600,000 tons.

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Mercury Production Off Sharply in 1948

A serious drop in domestic production of mercury took place in 1948, according to the Bureau of Mines. Output during the year was the smallest since 1933, and only two of the largest producers were in operation at year end. The world situation of oversupply in 1947 continued in 1948 and production in excess of needs, plus stock already on hand, pressed for a market.

Salient statistics on mercury, in flasks of seventy-six pounds, in 1948, as compared with 1947, were reported by the Bureau of Mines as follows:—

	1948	1947
Production*	14,100	23,244
General imports	41,732	10,228
Exports	786	864
Consumption	45,400	35,581
Stocks at year-end:—		
Consumers and dealers†	25,000	16,200
Producers‡	5,165	3,084

* In addition, at least 2,170 flasks were produced from the treatment of battery plates, scrap and calomel in 1948 and 3,500 flasks in 1947.
† Largely excludes redistilled metal.
‡ Held by reporting companies.

The average price per flask of mercury at New York was $76.49 in 1948, compared with $83.74 in the preceding year.

Chloral Hydrate Up

Producers of chloral hydrate announced a price advance of 15c per pound in this item and are now offering: USP XIII crystals in 40 lb. jar at $1.10 per lb.; 25 lb. jar at $1.15 per lb.; and 5 lb. bottle at $1.22 per lb.

Theophylline Down

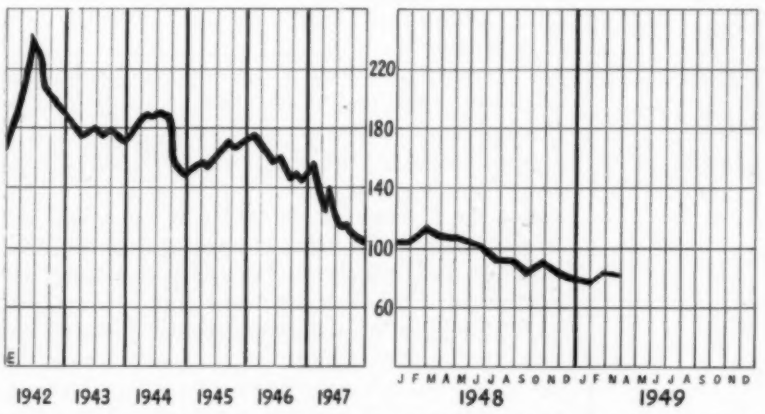
A reduction of 10c per pound in the spot market price of theophylline went into effect during the current trading period. The price schedule is now: 100 lb. drum, $7.50 per lb.; 25 lb. drum $7.65 per lb., and 5 lb. bottle $7.90 per lb.

Essential Oil Imports

During November 1948 the United States received essential oils from the Marseille Consular District of France valued at $55,596, compared with $6,118 in the preceding month, and $238 in November 1947.

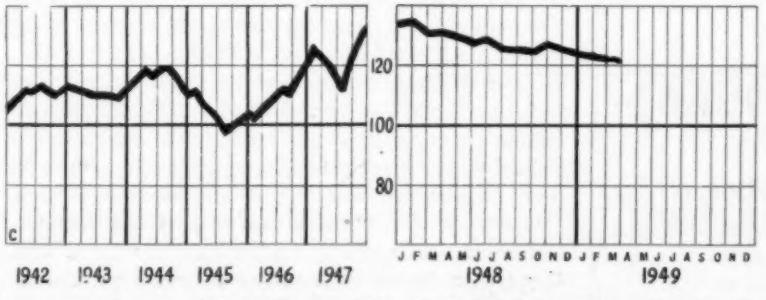
The value of exports of essential oils to the United States from Spain during 1948 was $228,000, compared with $500,000 in the preceding year and $758,000 in 1946.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index declined from 88.3 to 87.6. Bois de Rose, Cananga, Cassia, and Peppermint were lower. Bergamot advanced to $4.05.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index declined from 124.0 to 123.2. Balsam Peru, Balsam Tolu, and Glycerin were lower.

Wax Market

Although the trade reported in late January that demand for carnauba wax was inactive, arrivals in New York during the first 3 weeks of January ran around 2.5 million pounds. November imports of carnauba wax were 1,170,000 pounds, 56 per cent above October receipts.

Reported offers for February shipment of candelilla wax from Mexico show a decline in price with a consequent drop of about 5c a pound in the domestic market. During late January crude was offered at 60c and refined at 64c to 66c a pound. November imports of 1,101,000 pounds were almost five times the 221,000 pounds received in October.

In January the market for ouricury wax remained fairly tight, with stocks low and quotations unchanged. November imports of 77,000 pounds were less than half the 186,000 pounds received in October.

In the early weeks of 1949 demand for beeswax was light and quotations static. November imports of 341,000 pounds differed little from the 353,000 pounds arriving in October. However, 60 per cent of November imports originated in Africa, against 54 per cent in October.

Nux-Vomica Collection and Consumption, India

The latest trade estimates place the collection of nux vomica in India during the season November 1947 to April 1948 at about 1,800 long tons. A similar quantity is expected in the 1948-49 season.

Annual consumption of nux vomica in India is estimated at 200 tons. However, there are prospects for increased domestic utilization, since one large-scale Indian manufacturer of strychnine recently installed a plant with capacity of 400 to 500 tons of nux vomica per year. Processing during 1948 was far short of capacity. Several new pharmaceutical industries also are being established.

Late Price Declines

During late trading the following commodities were reduced in price: Cream tartar 3c per lb., now 30c; Tartar emetic 3c per lb., now 46c; Tartaric acid 3c per lb., now 35c; Rochelle sale 3c per lb., now 29c; and seidlitz mixture 2c per lb., now 26¼c.

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Drug Exports in 1948

(*Continued from page 437*)

	1947 ($ Million)	*1948*
Mexico	15.8	13.3
Canada	11.9	11.3
Cuba	11.3	11.1
Brazil	12.9	18.3
Argentina	10.8	15.9
Venezuela	7.3	9.7
Philippines	8.2	10.0
Hong Kong	4.6	9.3

India with $14.1 million was next to Mexico in 1947 but, with $5.3 million in 1948 dropped to tenth place, preceded by Colombia and France and on a par with Italy and Switzerland. While the United States had 27 other markets in 1947 in which sales ranged from $1 million to $5 million worth of drugs, although three dropped out of this select class in 1948, six others took their places. Since 38 major markets were recipients of 90 per cent of U. S. drug exports, it shows how meagerly served were the 60 or 70 other countries.

This is particularly evident in an analysis of drug distribution by continents. In the previous year, the principal marketing area, the 21 foreign countries of North America, acquired $47.67 million worth of drugs, but purchased only $44.25 million in 1948. Eight of these countries accounted for 95 per cent of drug exports. In fact, every country in South America except Paraguay took from a million to over $18 million worth of these essentials.

That over $105 million or three-fifths of total foreign sales were distributed to countries within the Western Hemisphere is encouraging, since it represents an average annual per capita demand of 70 cents for the area. The drug sales to a few countries of $3.00 per person should inspire even greater service efforts, but it would seem to be virtually ignoring opportunity in the Eastern Hemisphere. For example, the smallest continental distribution area was Europe, the recipient of $40.5 million, one-fifth more than in 1947, yet less than $4.75 million of this went to non-ECA countries. On a per-capita basis, Europeans acquired but one-tenth as much U. S. drugs as our Western Hemisphere neighbors. In fact, of the 32 markets involved, France, $6.3 million, Switzerland, $5.1 million, Italy $5.1 million, and Belgium, $3.5 million, accounted for half the European demand. Six other countries averaged almost $2 million each, and consequently the remaining countries averaged less than $459,000.

The billion or more inhabitants of Africa, the Near and Far East, the third largest outlet, received the remaining one-fifth of overseas sales amounting to $45 million or 8 per cent above 1947. On a per capita basis, this represented only one-twentieth that of the Western Hemisphere and half that of the European consumers. In addition to the Philippines and Hong Kong, there were only 8 other countries where demand ranged from $1 million to $5.25 million, notably India, South Africa, and China, which took half the area sales.

To all other countries, with the exception of Egypt, Iran, Siam, Korea, and Japan, sales were less than a million dollars each and seldom larger than what might be termed token shipments.

As to the character of demand: In North America, $11 million was for druggist preparations, $10 million for antibiotics, $8.5 million each for vitamins and proprietaries, and $6.33 million for medicinal chemicals. South America was the major outlet for antibiotics, $23.5 million, druggist preparations, $12.1 million, vitamins, $9.37 million, medicinal chemicals, $8.75 million, and the second largest market for proprietaries, $7.5 million. Europe's major interest was in antibiotics, $21.33 million, then medicinal chemicals, $7 million, Druggist preparations, $5.5 million, almost $5 million of vitamins, and $2 million of proprietaries. The Far East, Near East, and Africa were likewise antibiotic minded to the extent of $16.67 million, druggist preparations, $10.67 million, medicinal chemicals, $7 million, proprietaries, $6 million, and vitamins, $4 million.

It should be pointed out that export figures are not a reliable criterion of foreign demand and receptivity for United States drug products. Producers of standard self-medication remedies are the most merchandising conscious segment of the drug industry and consequently, in addition to export shipments, their overseas output is substantial and widely distributed therefrom. There is reason to believe that more of these products are consumed in every country throughout the world than ever before. Likewise some few producers in the other pharmaceutical branches were among the pioneers with plants abroad, and within the past year the momentum of foreign investment, licensing, and production has been noticeably accelerated. Since a few annual reports of ethical concerns show a large proportion of profit emanating therefrom, in contrast to the recorded and voiced effect of retarded exports, decentralized operation opportunity would appear to be decidedly alluring for other firms in the field. It may be that in the course of time this will be the only way in which consumer acceptance may be retained for some drug products in certain locations, notably Europe and its possessions in Africa and the Far East. The sooner such a decision is made, therefore, the less probability there will be of diminished overseas profits and competition even in the Western Hemisphere.

As to the current year, it is predicted that, based upon the $50 million sales in the fourth quarter of 1948 and the manifest outlook for the first quarter, there is every reason to believe that exports in 1949 will not be less than those of last year, and in all likelihood may be ten per cent larger.

Selection and Training of Detail Men

(*Continued from page 429*)

tives should be thoroughly informed about product disadvantages or dangers as well as advantages. I believe the reasons are obvious.

To sum up: Selection and training should be so

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By MARY CARROLL

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Preservation of Pharmaceuticals

(Continued from page 431)

factors such as sugar, glycerine, pH and solids so that these may be utilized for their effect to reduce the alcohol content. This is highly desirable in view of the cost of alcohol. It will be of considerable advantage for the developmental laboratory to devote some time to this phase of product formulation to be sure that there is first of all sufficient alcohol to preserve the product under all conditions of marketing, and also to be sure that a great excess of unnecessary alcohol is not being used, thereby increasing the cost of the product.

The following facts and calculations may be used as a guide in formulations containing alcohol with sugar, solids or glycerine.

U.S.P. syrup contains 850 grams of sugar per 1000 cc. of syrup, or 65 per cent of sugar by weight. It is generally regarded that 65 to 68 per cent by weight is the minimum amount of sugar required to just preserve a neutral syrup. But let us assume that a preparation is to contain 600 grams of sugar per 1000 cc. Since it will not be self preserving, how much alcohol must be added in order to keep it? The first consideration is the U.S.P. syrup equivalent and the amount of free water present. If 850 grams of sugar require 450 cc. of water to make 1 liter of U.S.P. syrup, a ratio of 1 part of water to 1.9 parts of sugar exists on a volume basis, the reciprocal factor being 0.53. In order, therefore, to calculate the amount of water to be added to a given weight of sugar to produce U.S.P. syrup, the weight of sugar is multiplied by 0.53.

For example:

850 Grams sugar x 0.53 = 450 cc. of water required

or

600 Grams sugar x 0.53 = 318 cc. of water.

To calculate the volume of the completed U.S.P. syrup multiply the weight of sugar by the U.S.P. syrup-sugar ratio $\frac{1000}{850}$.

For example:

$$850 \times \frac{1000}{850} = 1000 \text{ cc.}$$

or

$$600 \times \frac{1000}{850} = 705 \text{ cc.}$$

In the case of the syrup containing 600 grams per liter, the 705 cc. may be regarded as the U.S.P. syrup equivalent and should be subtracted from one liter:

1000 − 705 = 295 cc. = free water equivalent

If this 295 cc. requires 18 per cent alcohol to preserve it, then 295 x .18 = 53.1 cc. or 5.31 per cent of alcohol required.

If other solids in addition to the sugar are present, they should be taken into consideration and the amount of free water found after subtracting the volume of water displaced by the solids.

If glycerine is present, the per cent by volume may be doubled and this figure subtracted from the free water.

Suppose a syrup of bromides contains in each liter:

Total bromides—160 Grams, displacing 70 cc. of water
Glycerine —10 per cent by volume
Sugar —425 Grams
Water

How much alcohol would be required to preserve this product?

$$25 \times \frac{1000}{850} = 500 \text{ cc.} = \text{syrup equivalent}$$

$$1000 - 500 = 500 \text{ cc.} = \text{free water}$$

Since the bromides displace 70 cc. of water,

$$500 - 70 = 430$$

Ten per cent glycerine by volume = 1000 x .10 = 100 cc. x 2 = 200 cc.

$$430 - 200 = 230 \text{ cc. free water}$$

$$230 \times .18 = 41.4 \text{ cc. (4.14 per cent) of alcohol required for preservation}$$

The additive effect of sugar, alcohol and solids is recognized in the U.S.P. and N.F. preparations and many have a high sugar content with a low alcohol content. Elixirs of potassium bromide, ammonium bromide and sodium bromide contain 5 to 7 per cent alcohol, Compound Syrup of Squill contains 7 to 8 per cent alcohol, and Syrup of Orange 3.7 per cent alcohol, to mention a few.

This is not an irreproachable rule and should not be relied upon entirely since composition alters conditions, but it may be used as a guide in formulation. It should not be applied without laboratory investigation and stability tests.

The organic acids and their salts have beenwidely and largely empirically used in the preservation of pharmaceuticals and foodstuffs. What has been said of the paucity of information in the literature concerning the preservative action of alcohol is true of benzoic and salicylic acid. Herter[6] found that while 0.2 per cent of sodium benzoate retarded the growth of E. coli in glucose broth, it did not have this effect when calcium carbonate was present. Perry and Beal reported that the growth of Saccharomyces cerevisiae was prevented by the presence of 0.5 per cent sodium benzoate and was killed by 3 per cent. In seeking a suitable antiseptic to prevent the fermentation of honey, Lockhead and Farrell[7] found sodium benzoate, sodium borate and sulfurous acid to be promising while sodium salicylate was found to be incapable of exerting an inhibitory effect within permissible limits. Sodium benzoate in alkaline media is much less effective

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than sodium benzoate as benzoic acid in acid media. Salicylic acid has some activity while as sodium salicylate in alkaline media it is inactive. Numerous statements concerning sodium benzoate and sodium salicylate may be found in the literature but without knowing the pH of the media in which the tests were made, the data is unintelligible.

Cruess and Richert[8] found that at a pH of 7.0 fermentation proceeded slowly even in the presence of 3 per cent sodium benzoate while at pH 4.5, fermentation was prevented by 0.1 per cent of the acid. When the degree of acidity was increased to 3.0 fermentation was completely prevented by the presence of 0.06 per cent sodium benzoate. Thus with an increase of acidity from pH 7.0 to 3.0, the amount of sodium benzoate necessary to prevent growth of Saccharomyces ellipsoidens was decreased over 50 times. Similar results were obtained with E. coli and B. subtilis.

Citric acid, a tricarboxylic acid produces a greater degree of acidity than either lactic or acetic acid and is a considerably more efficient preservative according to Erickson and Fabian.[9] It has a distinct advantage over many other organic acids in the pharmaceutical field in that it lends itself very well to flavor development and is often a useful taste adjunct.

Monochloracetic acid has been suggested as a satisfactory substitute for benzoates in food preservation. Morrison and Leake[10] have found that the acid is an effective food and beverage stabilizer at an optimum concentration of 0.03 per cent. At 0.05 per cent it inhibited the growth of characteristic microorganisms but did not inhibit peptic or tryptic digestion. After extensive investigation, Fabian and Bloom[11] found that under practical conditions monochloracetic acid was about as effective as benzoic acid. These workers found dichloracetic acid to be less and trichloracetic acid to be still less effective than monochloracetic acid. Because monochloracetic acid is not necessary for the preservation of food and has little advantage over benzoates, it has been declared an adulterant by the Food and Drug Administration.

Propionic acid usually as the sodium or calcium salt, is frequently added to foods to inhibit mold and bacterial growth. These salts have been marketed under the trade name of Mycoban. Propionic acid is a normal constituent of body fluids resulting from the breakdown of fatty acids. Propionic acid is relatively non-toxic and 2 to 3 ounces of the calcium salt is usually added to each 100 lbs. of white flour in making bread. Miller[12] found propionic acid to be an excellent preservative for inhibiting mold formation on cheese. Although propionates have found some application in the pharmaceutical field as fungicidal agents, little apparently has been done with them as preservatives.

Of all the preservative compounds used, the esters of p-hydroxybenzoic acid have probably enjoyed the most careful investigation and the widest use in the pharmaceutical industry. Unlike benzoic acid they have the advantage of being active both in acid and alkaline media. Like the phenols, their activity is

somewhat reduced in alkaline solution but they are nevertheless sufficiently active to merit use and consideration.

Although the esters are sparingly soluble in water, their sodium salts are quite soluble and this provides a means of introducing them into products without using alcohol or heat. These compounds are most effective in acid solutions but are quite efficient preservatives in neutral and alkaline solutions.

The sodium salts of the esters may be prepared by adding the ester to sodium hydroxide with stirring for one half hour at temperatures not exceeding 30°C. The resulting solution should be used immediately to prevent extensive hydrolysis.

The following proportions are required to convert the esters to their sodium salts[13]:

1 lb. Methyl-p-hydroxybenzoate requires 5.25 lbs. of 5% NaOH

1 lb. Ethyl-p-hydroxybenzoate requires 4.80 lbs. of 5% NaOH

1 lb. Propyl-p-hydroxybenzoate requires 4.44 lbs. of 5% NaOH

1 lb. Butyl-p-hydroxybenzoate requires 4.12 lbs. of 5% NaOH

Because these compounds have been marketed under a number of trade names, a considerable amount of confusion has resulted. The following list gives the chemical name of the compound and the various trade names by which they are known:

Table 1

Chemical Name	*Trade Names*
Methyl-p-hydroxybenzoate	Methyl Parasept (a)
Methylparaben U.S.P. XIII	Nipagin M (b)
	Tegosept M (c)
Ethyl-p-hydroxybenzoate	Ethyl Parasept (a)
	Nipagin A (b)
Propyl-p-hydroxybenzoate	Propyl Parasept (a)
	Nipagin A (b)
Propylparaben U.S.P. XIII	Tegosept P (c)
Butyl-p-hydroxybenzoate	Butyl Parasept (a)
	Butoben (d)
Benzyl-p-hydroxybenzoate	Nipabenzyl (b)

(a) Heyden Chemical Corp. New York
(b) Used in Europe
(c) Goldschmidt Chemical Corp. New York
(d) Merck and Company, Rahway, N. J.

Table 2

Ratio of Inhibiting Power of Various Esters of p-Hydroxybenzoic Acid (Taken in part from the work of Suess[14]

Compound	*Mold Inhibiting Power*	*Bacteriostatic Power*
Phenol	1	1
Methyl ester	3.7	3.8
Ethyl ester	8.5	8.0
Propyl ester	25.0	17.0
Butyl ester	40.0	32.0
Benzyl ester	69.0	109.0
Benzoic acid	5.6	1.3
Salicylic acid	6.7	2.2

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Table 3

Properties of Some Esters of p-Hydroxybenzoic Acid [13]

p-Hydroxybenzoate	*Methyl*	*Ethyl*	*Propyl*	*Butyl*
Molecular Weight	152.14	166.17	180.20	194.23
Melting Range	125-127 °C.	116-118 °C.	97-100 °C.	68-71 °C.
Solubility—Grams/100 grams				
Acetone at 25° C.	64	84	105	240
Benzene at 25° C.	0.7	1.65	3	40
Carbon Tetrachloride at 25° C.	0.1	0.9	0.8	1
Ether at 25° C.	23	43	50	150
Methanol at 25° C.	59	115	124	220
Ethanol at 25° C.	52	70	95	210
Peanut Oil at 25° C.	0.5	1	1.4	5
Propylene Glycol at 25° C.	22	25	26	110
Water at 25° C.	0.25	0.17	0.05	0.02
Water at 80° C.	2	0.86	0.30	0.15

For preservative purposes use 0.1 to 0.2 per cent of the various esters of p-hydroxybenzoic acid. It will be noted from Table 3 that the solubility of the esters in water decreases as the molecular weight increases. This should be taken into consideration when using the compounds in formulations. They become more soluble in oils as the molecular weight increases. This should be borne in mind in formulating emulsions. In alkaline aqueous phases the esters remain as the salt but where the phase is acid the ester is largely dissolved in the oil phase.

The following table is taken in part from the work of Suess[14]:

TYPE OF PREPARATION	*Parahydroxybenzoic acid esters Quantities required in percent*				
	Methyl ester	*Ethyl ester*	*Propyl ester*	*Butyl ester*	*Benzyl ester*
Creams					
Free from oil	0.15	0.05	0.02	0.01	0.01
Low oil content	0.3	0.1	0.03	0.02	0.01
Medium oil content	0.5	0.15	0.1	0.7	0.05
High oil content	1.0	0.3	0.2	0.15	0.1
Containing cholesterol and lecithin	0.3	0.1	0.03	0.02	0.01
Lotions					
Low oil content	0.3	0.1	0.03	0.02	0.01
High oil content	0.5	0.15	0.1	0.07	0.05
Jellies					
Acacia, tragacanth, pectin, starch, gelatin, agar, Iceland moss	0.15	0.05	0.02	0.01	0.01
Syrups	0.5	0.15	0.1	0.07	0.05
Solutions and Mixtures	0.15	0.05	0.02	0.01	0.01

Combinations of two or more of the esters of p-hydroxybenzoic acid esters are more effective than an equal weight of any one of them used alone.

In conclusion it should be pointed out that the field of preservatives is a prolific one for research and investigation. The fault of much of the work which has been done is that it has not been planned or organized and the results not well correlated. The compounds now used as common preservatives should be further investigated and beyond this is the vast number of compounds which have preservative action, known or unknown, which may be investigated for efficiency and toxicity in order to determine which of them are safe for general use.

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Something for Nothing

(Continued from page 425)

The possibility of obtaining your fuel for nothing should not be ignored even though there are in this country relatively few areas where natural gas wells are available. I know some plants that are located reasonably close to pipe lines and oil storage depots so that they get a metered oil supply piped into their plants at a very substantial saving. I know other plants located close enough to established factories having an excess of their own generated steam and power supplies so that they get both steam and power at a cost much less than they could make or buy either. The proximity of other small plants is a factor because the cooperative generation of steam and power frequently provides these necessities at a cost far less than they can otherwise be had.

I have cited these instances to illustrate what you may accomplish if you realize that your first purpose in locating a plant is to discover what can be had for nothing and what can be had for less than usual costs. You must always keep in mind that in establishing a plant you also are establishing an overhead floor which you will never be able to lower.

Having selected an area and having also selected a few likely sites, the next thing to remember is that there is no relation between the cost of a site and its value to you. A site costing a hundred dollars an acre may be expensive to operate and one costing a thousand may be cheap. But whatever the site may cost you to buy, you can, if you are willing to invest a little extra money, get that site ultimately for nothing. You should always buy more land than you need because land in established industrial areas never goes down and land in undeveloped industrial areas always goes up. The possession of extra land in an established industrial area gives you the opportunity of chosing your immediate neighbors and of doing so at a profit. I have clients in the Industrial Clearing District of Chicago who are biting their nails now because they didn't buy extra land when they went there several years ago, when the land could have been had for a thousand dollars an acre. Today when they need the land for expansion purposes they can't get it and its value runs from ten to twenty thousand dollars an acre.

The very fact of building in an undeveloped industrial area automatically increases land values at once. Service lines and transportation facilities are extended to the property and the land all the way along these lines doubles or triples in value. Following my suggestion one of my clients bought three times as much land as my fifty year projection indicated he would need. Even before construction operations had begun he could have sold part of the site for five times what he had paid for it. He didn't sell because he realizes now, that not only will the reserved portion actually cost us nothing, but there is better than an even chance that continued increases in land values in that area may enable us to build the entire plant

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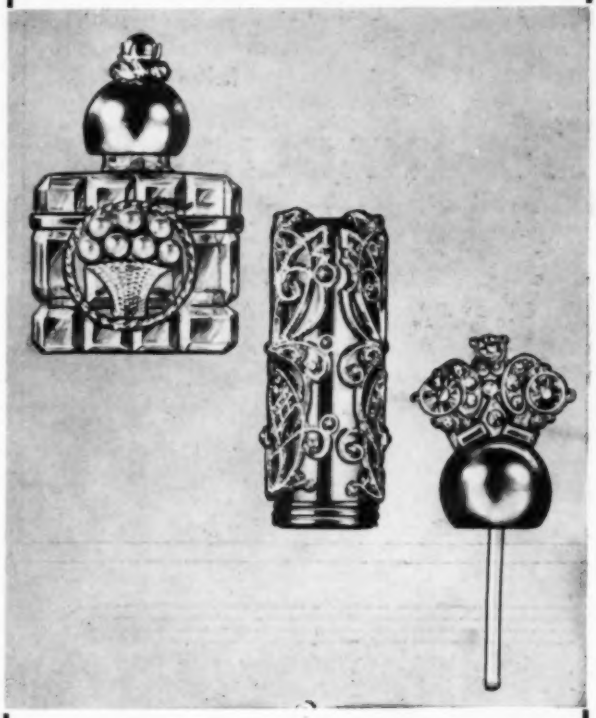

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for nothing! When you buy a plant site you should realize you are going temporarily into the real estate business and you should take full advantage of that fact.

Before passing to actual construction I wish to say a word on the merits of urban versus suburban or country construction. If it were left to me I would never build a plant in an urban location. In these days of fast automobile and truck transportation as well as general accessibility of railroad lines, and even, in some cases, of water transportation, cities haven't anything to recommend them as industrial centers. Land is scarce and its use restricted; expansion is difficult excepting vertically; taxes, insurance and other charges are high. Land and building costs are higher. Moreover we saw what happened to European and Asiatic cities in the last war and our turn may be next. The government thinks so anyway because on certain types of critical work it will not give contracts to plants located in urban areas, and, in several instances, has caused plants to be removed from congested cities to the country.

Up to now we have discussed the general aspects of plot location. Let's rapidly touch on specific aspects. Having satisfied yourselves with the general area from marketing and economic points of view and having selected what looks like a good site, the next features to investigate are the topography of the plot as this has an important bearing on grading and fill costs and also floor levels of the plant. By test borings you will determine the character of the soil and the sub-soil. Sometimes you will find that a nice level site with apparently good drainage if nothing more than a crust a few feet thick resting on muck. Drainage questions warrant careful investigation especially if you must use septic tanks. This also has a bearing on effluent and waste disposal, especially if the site happens to be in the watershed of a nearby city. If sewage and waste water may be dumped into streams you must consider the carrying capacity of those streams because it is not uncommon for relatively small plants to have wastes and spill waters amounting to several hundred thousand gallons of water daily and even several million, especially when they are air conditioned with water as the refrigerant. If the sewage from the plant and the water and chemical wastes are to be disposed of through existing sewer lines check their capacity.

Fire and police protection should be investigated carefully. Zoning laws should be looked into. The character of your industrial neighbors should be studied. The local political situation should be analyzed.

The kind and availability of local labor should be studied along with transportation and recreational facilities. Housing, schools and shopping facilities should be considered. The tax history of the community should be studied and its probable future tax requirements estimated.

In brief the investigation of the site before you begin to build cannot be too detailed.

Now that you've got a site what sort of building will you build? I think most of you who have followed my writings on the subject know what my answer will be—a single story building of course. There are so many provable economic arguments in favor of single story buildings, which can be demonstrated mathematically, that it pains me to see some of the large companies building two and three and even higher manufacturing buildings. Right now the pain is mine but later on the pain will be theirs and it will hurt like hell—in the pocketbook. To my mind to build anything but a single story building is not only uneconomic but utterly foolish. I am excluding of course those urban areas in which a large investment has been made and cannot be junked and in which there is no alternative but to go upward because enough land is simply not available at any price. I feel sorry for firms that are so situated.

I think I should be safe in laying claim to a greater variety of production experience than any man in the industry regardless of his age. I have worked in every phase of the drug and cosmetic business and in the food, paint, candy and chemical industries as well. I have worked in every kind of factory beginning with huge ten story jobs comprising almost a million feet of floor space. My first job out of college was in a plant like that and the experience has since been duplicated several times. I have worked in eight, seven, six, five all the way down to one story buildings and from frequently repeated personal experience I can assure you I know what I am talking about.

I first began to think of the factory building as the primary production tool, of which all other tools and devices are subordinate parts, about twenty years ago when I was plant manager of a concern operating a five story plant. At that time I realized that the Ford Motor Company, alone among manufacturers, had done any scientific thinking about the function of building type in establishing cost foundations. I began to analyze my own plant in the manner I have indicated to you here and I redesigned it as a three story unit. I was smugly satisfied with myself. The new plant obviously was a lot better than the old and for a time I thought I had arrived at the right answer. But I was completely wrong. In spite of a varied experience of ten years previous to that, there was still a lot I didn't know about buildings, material handling equipment and expansion necessities. I was wrong because I foolishly believed in some of the old shibboleths, which are utterly untrue, such as "gravity flow" and "a straight line is the shortest distance between two points."

Ten more years of an extensive consulting practice went by during which I modernized all manner of buildings and plants. I soon realized the fallacy of the gravity flow shibboleth. But I stuck longer to the straight line theory and during that period designed several new plants predicated on straight line flow from warehousing straight through manufacturing and packaging into finished stock and shipping. On paper

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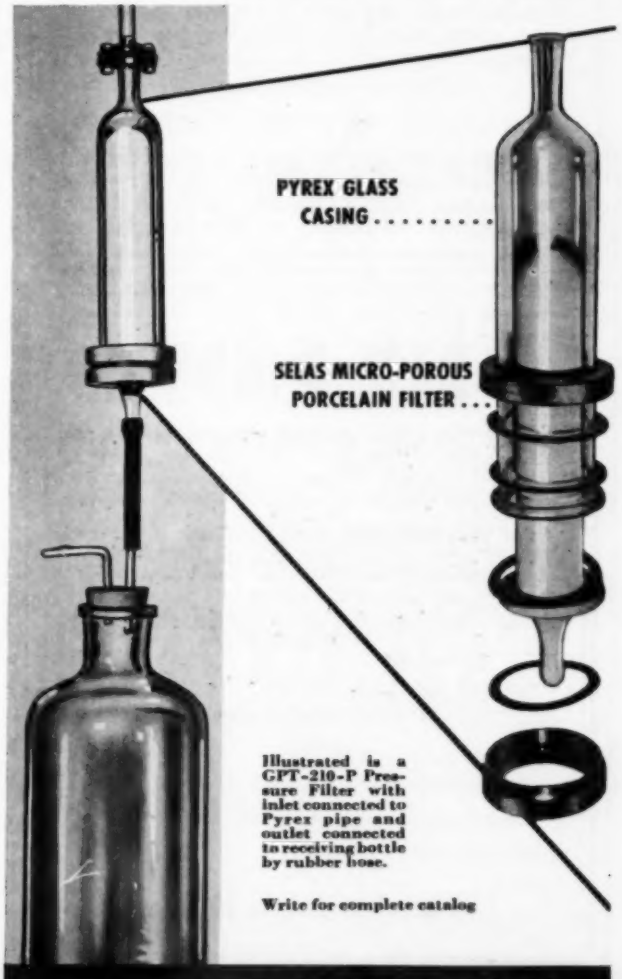

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and in practice the layouts looked good and my clients were delighted with the results from an economic standpoint. But I was still wrong.

Expansion and warehousing and material handling bothered me. I had assumed incorrectly that if a building were designed so that its manufacturing and packaging elements could be expanded two ways, that's what would happen. I then began to realize that is what *doesn't* happen simply because needs for increased space for particular departments very rarely demands large increments of space, and no management will make building additions until the space demand is large enough to justify new construction. Since expansion requirements usually require small increments at a time, a hundred feet for one department; then perhaps a thousand feet a little later for another department and so it goes until the nice, neat logical layout you started out with is a diintegrated, disorganized mess. A factory or an office or a laboratory grows foot by foot and not acre by acre.

At the same time I realized that the separation of raw and finished stock warehousing was illogical and uneconomical. Material handling is material handling. Hence I saw in the consolidation of the functions of raw material warehousing and finished stock warehousing an opportunity to reduce material handling costs,—overall space requirements and perforce construction costs. I also saw in the consolidation an opportunity to get away from straight line layouts and to use warehouse space as an expansion buffer.

Hence in the new plants I have designed in recent years, nine of them, warehousing is regarded as a single function and the warehouses are arranged parallel to manufacturing and packaging departments. Since it is always possible to consolidate warehouse stocks or diminish space requirements by closer buying, the warehouse space in these new plants can gradually be absorbed as required by the operating departments.

When the point is reached when no further stock squeezing can be done, additional warehousing can be added and thus the additions always take the form of the cheapest construction. In such plans, only the steel framework of the buildings, the roof and floor slabs are permanent. The sidewalls are sheathing or cinder block and the foundations are designed to take brick or masonry facing, which can be added together with hung ceilings, permanent lighting, tile inner walls and ventilating equipment at the time the warehouse space has been absorbed to the point where new construction is justified.

By arranging supplies parallel to the departments that use them, handling of raw stock and finished goods is reduced to a minimum.

Some of you undoubtedly are wondering what is to be done about service rooms, locker rooms, cafeterias and the like, and offices as well as laboratories.

I prefer them to be single story units arranged in front of the plant in such a way that each function can be expanded as required without colliding with the

other functions. Inasmuch as service functions involve the most expensive type of construction—an air conditioned, sound proof research laboratory will cost from twenty-five to thirty dollars a square foot, as against fifteen dollars for top grade air conditioned and sound proofed manufacturing space—it is important to devote a lot of sound thinking to this phase of the construction program. I have come to the conclusion that the best way to do it is to strike off two segments of the plot, one to be reserved forever for office and service facilities, the other for laboratories. By arranging these facilities in the form of an el around the corner of the building, the laboratory area serves as one facade of the building and the office the other. The expansion of each function thus follows the building line established by the plant itself.

I have no serious objection to putting such facilities on a second floor, but this procedure increases construction costs because the foundations, the columns and the footings all must be made heavier, not only immediately under the second story but all through the plant over which the second story is likely to expand in the future. This more than offsets the roof savings.

I should like to say a final word about architects. Most of them are artists and have little conception of the effective use of space and often less conception of construction costs. That is why among other reasons, many big builders like the Austin Company will not take a construction job if an independent architect is employed. I work with architects all the time and with most of them I get along very well as long as it is made perfectly clear at the outset that the architect has nothing to do with the basic location, design and layout of the building and that his function is primarily decorative and supervisory. We are unfair to architects in many cases. Obviously they work in many industries and cannot be experts in all. Therefore they are obliged to rely upon what you tell them about your business. Since the design of a new plant is something which may never happen but once in your business life, what you tell the architect may be right insofar as it reflects your experience and your immediate requirements, but it may be fundamentally all wrong from an economic or an industry point of view. That's exactly why we have so many factories that are all wrong today.

Factors Influencing Cosmetic Sales

(Continued from page 423)

painful facts of readjustment of manufacturing and distribution for public consumption. This situation is now, and for the last year has been, a characteristic of practically every consumer product.

There is no reason for any assumption other than that the course of cosmetic sales will continue to take a parallel course to disposable consumer income. Since there seems to be very little reason, either from the viewpoint of economics and even more from a political viewpoint, that disposable consumer income will substantially drop over the next few years; there is every

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•

It all started because the President felt the newspaperman was too often talking through his sponsor's hat. He was especially disturbed when Pearson wrote an unmusical theme that might have been called, "The Afternoon of a Vaughn."

•

All sensitive citizens should be consoled by the fact that not one of the President's abbreviations could be spelled out as a four-letter word. ("Shmo" doesn't count.)

•

And appropriately, Truman's flair for words has international flavor, too. Calling Communists traitors is probably the only label left unchallenged by the Food and Drug Administration.

•

In an age of electronic and atomic advances, who can be sure that damning war currents isn't the proper preliminary to damming them?

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reason to expect a revival of manufacturers' sales as distressed goods and retail stocks are cleared and a resumption of manufacturers' sales parallel once again the disposable income.

Quaternary Ammonium Compounds

(Continued from page 436)

sentative products. In one series of tests, dogs were given the quaternary components (in a dilution 1:5,000) in their drinking water for a period of six months. No toxic symptoms were noted and no damage to any organs was seen on autopsy. As a result of these and other chronic toxicity tests, it was concluded that, in the concentrations tested, "these substances are apparently non-toxic to warm-blooded animals."

Since the quaternaries are finding growing utility as antibacterial agents for application on the skin, mucous membranes and denuded areas, their local effects are of considerable concern. As pointed out in authoritative source,[18] many of the quaternary ammonium compounds have been used as local anti-infectives for several years and very few instances of skin hypersensitivity have been reported. However, as noted in a recent publication,[21] with the widespread use of the quaternaries, a few cases of dermatitis have been reported after prolonged application.

Here too, Shelanski's studies of four typical compounds provides some pertinent information. After making patch tests on 250 men and women, he reported that solutions of 10 per cent and 1 per cent were irritating, but that 0.1 per cent solutions produced no reaction, even after a week. Moreover, there was no evidence of sensitization.

Also very indicative both with respect to irritation and antibacterial action are the studies made by White hill.[22] As can be seen from the table[23] given below, he made a comparison, not only between quaternaries and other disinfectants, but also between individual quaternary compounds:

Disinfection at Maximum Non-irritating Concentration

Compound	Maximum Non-irritating Concentration of Active Ingredient	Time in minutes Required to Kill Staph. Aureus at 37° C.
*Emulsept	1:2,000	0.5
*Zephiran chloride	1:3,000	0.5
Merthiolate	1:1,000	60.0
*Hyamine 1622 (Phemerol)	1:1,500	20.0
Phenyl mercuric nitrate	1:10,000	22.5
Acriflavine	1:2,000	12.0
Silver nitrate	1:300	45.0
*Roccal	1:20,000	13.5
Mercuric chloride	1:1,200	5.0

*Quaternary ammonium compound.

From this table, and as was previously indicated, it is evident that there may be considerable difference between the irritant properties of individual quaternary ammonium compounds. Degree of purity also influences the picture. It is also evident that the quaternaries show marked variation in antibacterial action.

Aside from impurities, there are a number of factors that influence the bactericidal action. Chemical structure is an important consideration. The relationship of chemical structure to germicidal action of various quaternary ammonium compounds is now well-known. In general, say Lawrence and his associates,[24] the chain length of the lipophilic group in the molecule determines or influences the degree of antibacterial action of the compound. The C_6, C_8 and C_{10} alkyl derivatives of quaternary ammonium compounds have but feeble action against micro-organisms. Compounds with carbon chain lengths of C_{12}, C_{14} and C_{16} have proved most effective. However, upon increasing the number of atoms to C_{18} there is a marked reduction in activity.

Since these compounds belong to the class of cationic detergents, Lawrence and his co-workers also investigated the influence of surface activity. From their studies it was apparent that there is no correlation between surface tension and the degree of antibacterial action of the compounds investigated. This included a homologous series of quaternary ammonium salts with 12 to 18 carbon atoms on the straight chain alkyl group.

Taking into account the influence of structure and other factors, it is possible to broadly consider the antibacterial action of the quaternary ammonium compound. Especially important is the frequently cited work of Baker, Harrison and Miller[25] in 1941. They reported that all the cationic detergents studied by them are very effective inhibitors of bacterial metabolism at 1:3000 concentrations and that several are equally active at 1:30,000 concentration. Effective against both gram-positive and gram-negative organisms, the compounds were found to be more active in the alkaline range.

With time and with further investigations, the picture has been modified according to newer findings. As pointed out by McCulloch, Hauge and Migaki,[26] under certain circumstances and against certain organisms, the power of the quaternary ammonium compounds to reduce bacterial populations is phenomenal. However, under slightly different conditions and against other types of organisms, they are much less effective. This, they note, has led to the publication of apparently contradictory data and has caused much confusion regarding the indications and contraindications of these substances.

One major disadvantage of these compounds, it is remarked, is their inability to kill tetanus spores and the gas gangrene anaerobes. Tests[27] with several quaternary ammonium compounds have shown that they can inactivate influenza A virus, vaccina virus, and certain bacteriophages. However, McCulloch and his co-workers[7] stress the need for individual evaluations of virucidal efficiency because, like bacteria, the viruses may vary in their susceptibility to the quaternaries. Summarizing much current data, these authorities state that the quaternary ammonium compounds are most effective against streptococci, stophylococci, and other non-sporulating Gram-positive organisms. They

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are less effective against Gram-negative organisms, such as members of the coliform, paratyphoid, and typhoid groups.

There is much to be learned concerning these compounds. Many workers feel that a major obstacle to the true evaluation of quaternary ammonium compounds is the lack of an appropriate test or tests. As indicated by Klarmann and Wright,[28] over the years it has become a matter of common knowledge that quaternary ammonium compounds do not yield uniform or consistent results when subjected to testing by the so-called F.D.A. "phenol coefficient" method. Indeed, one group of workers[7] feels that phenol coefficient values of quaternary ammonium compounds are "dangerously misleading."

Similar views have been expressed by other students of the subject. Many suggestions for modified or special test procedures have been published. Nonetheless, as remarked by Stuart[29] and by other investigators,[30] it is believed that the only true criteria to the effectiveness of a quaternary ammonium germicide, or any other germicide, are tests made under conditions of use or tests devised to simulate these conditions as closely as possible. At present, industrial groups are working in cooperation with government experts toward the development of adequate bacteriological methods for testing the quaternaries.[5]

As is the case with many other antibacterial compounds, there are a number of substances which interfere with or even inactivate the germicidal efficiency of the quaternary ammonium compounds. Because they are cationic, the quaternaries react with anionic substances and are rendered ineffective. Soap, of course, is the commonest example of an anionic material. It should be completely removed from a surface before a quaternary germicide is applied. In addition to soap, other incompatibles of this class include alcohol sulfates, sulfonates, and other high molecular weight, negatively-charged materials.[16]

The quaternary ammonium compounds are also inactivated by excessive amounts of organic matter, such as blood, sputum, serum, urine, feces, most food particles, oils and other substances.[6] Organic material is especially active against the quaternaries when it is acid in reaction or contains cholesterol or other sub-

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stances which may act as anionic detergents. Another very important point that has been brought up, is the inability of the quaternary ammonium compounds to penetrate grease films and kill bacteria. Even a microscopic film of oil or grease is sufficient to afford protection to bacteria.[7]

The quaternaries are compatible with solutions of many drugs, but incompatible with others. Data on the compatibility of individual compounds with various drugs and chemicals are available, as a rule, from the manufacturers of the antibacterial agents.

Because of the various materials that may interfere with or weaken the action of these compounds, several methods and materials have been developed to test the strength of the solutions. Such test materials are especially important when the quaternaries are used as sanitizers in food plants, dairies, restaurants, hospitals and elsewhere. Among the items developed for this purpose are easy-to-use test papers,[7,31,32] more accurate test kits,[7,33] and even self-indicating quaternary ammonium germicides which change color at different concentrations.[34] However, it is felt[35] that these tests may be of questionable value because, even though they measure the concentration of the compounds, they do not measure the bactericidal factor.

(To be concluded)

Depilatories in Review

(Continued from page 481)

straight chain, aliphatic type; the higher ketones; and the higher ethers.

Claim 1 follows:

A depilatory comprising a system of at least two liquid phases one dispersed in the other, one of which liquid phases upon application of the depilatory preferentially wets the hair substance and exerts a depilating action thereon which phase comprises an aqueous solution of a depilating agent, and the other of which liquid phases upon application of the depilatory preferentially wets the skin and serves as a protection to the skin which phase comprises a substantially non-toxic and non-irritating liquid lipin solvent compatible with the depilating solution and of limited miscibility therewith and possessing a sufficiently high wetting power and a sufficiently low volatility to spread over the skin rapidly and to remain thereon while the depilatory is in contact with the skin to afford protection of the skin from the irritating action of the depilating agent.

U.S. 2,199,249, issued April 30, 1940, for Depilatory to William B. Stoddard and Julius Berlin.

The disclosure of this patent is substantially the same as that of U.S. 2,123,214.

Claim 2 shows the extent of protection obtained:

A soluble stannite solution having a pH value of about 12.3 or less and containing a stabilizer of the class consisting of organic compounds having at least three alcoholic hydroxyl groups.

U.S. 2,202,829, issued June 4, 1940, for Preparation for Removing Hair from the Body to Martha E. Buff.

This "hair-pull" depilatory is said to be usable without the application of preliminary heating. The new depilatory contains rosin (10 ounces), beeswax 2/3 ounce) and mineral oil (6 ounces.)

Claim 1 follows:

A depilatory containing rosin and a non-drying oil and a small amount of wax, the amount of oil being more than half the amount of rosin.

(To be concluded)

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